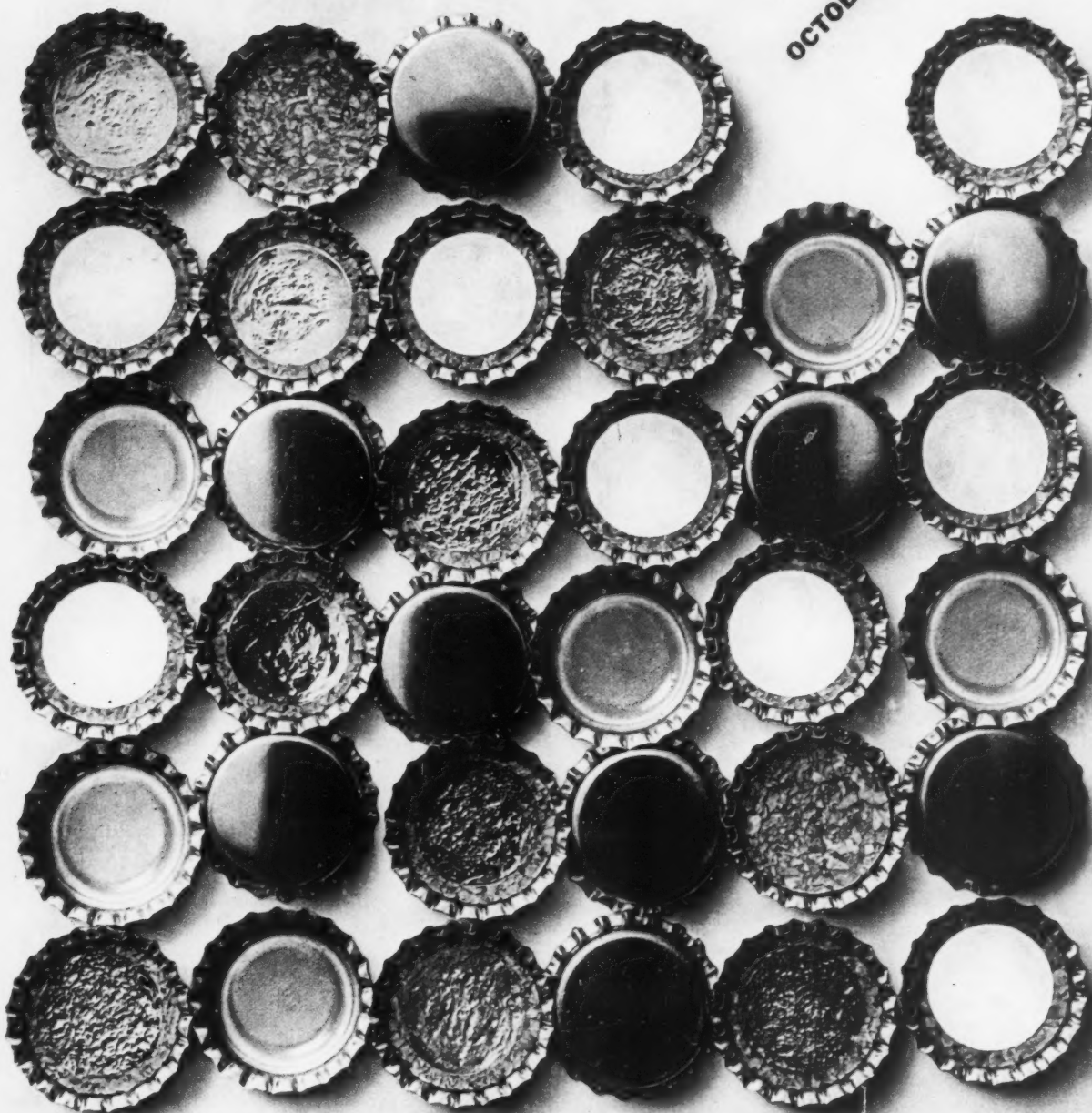


MODERN PACKAGING

OCTOBER 1960



GREAT PACKAGING DISCOVERIES: *The crown cap*

Background for Packaging | *World Report* | *Cost Cutters* | **Complete contents, pp. 2-3**

Ray Kellerman



**SEEN
FROM A
DIFFERENT
VIEWPOINT**

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Our viewpoint—which covers every facet of our customers' problems—is all inclusive.

We have pressure sensitive adhesives that withstand heat, cold and aging without yellowing or loss of tack.

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a tight package

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Lots of good things come from

GOOD YEAR

Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

95 **Foamed plastics on the rise**

Already one of the biggest trends of the day, ultra-lightweight foamed plastics may prove the packaging sensation of the '60s. In a host of product fields, packagers are taking advantage of the economy, protection and merchandising efficiency offered by these flexible and rigid materials. Here is a full-scale report.

General interest.

102 **Moisture control with corrugated**

A Maryland hydrangea grower capitalizes on the water-resistance function of wax-impregnated corrugated board to hold moisture around plant roots during shipment, abandoning traditional wrappers. Results: reduced product damage, savings in packaging time and shipping costs.

Special interest: all users of corrugated.

104 **Blister economy**

How to achieve greater production efficiency in thermoforming? White Shield provides an answer via the adoption of a multiple-unit mold with removable cavities that gives this distributor of drugs four blisters for five products at the price of only one multiple mold.

A production methods article.

106 **Graphics 1960**

Now showing in New York is "AIGA Packaging 1960," an exhibit of 200 packages selected as

outstanding examples of graphic technique as a means to visual communication. The collection indicates a trend to more sophisticated design.

Special interest: designers, sales, advertising.

109 **The first polypropylene wrap**

The polyolefin film that is expected to have as big a packaging potential as polyethylene or cellophane makes its commercial debut as a wrap for Ward Baking's breads. Combining extra clarity and water-vapor protection, the low-cost 1-mil film has a soft feel, yet is machinable.

Special interest: all film users.

112 **Instant package testing**

Packagers of products that require stringent protection until the moment of use will be interested in R. T. French's rigorous package-testing program. At \$1,400-a-year saving, new containers are subjected to transcontinental shipment stresses without leaving the plant.

Special interest: hermetically sealed products.

114 **The crown cap**

A *Great Packaging Discovery*. Today's efficient crown cap costs less than its first rude predecessor, which appeared in 1889. It has replaced every other closure in its field and sparked the growth of bottled beer and beverages, which last year used 46½ billion crown caps.

General interest.

116 **Brick packaging mechanized**

The flexibility of modern packaging equipment enables Robinson Brick to turn away from hand operations in the packaging of building bricks. A new semi-automatic bundling and strapping system cuts labor costs and halves breakage.

A production methods article.

118 **New progress in pouching**

Skinner Mfg. shows that the principle of horizontal form-fill-seal in film can be adapted

FRONT FEATURES

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Important new products from suppliers.

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We ask the readers: Who in your company is the final package decision-maker?

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What's news in foreign packaging magazines.

93 **Editorial Memo**

"Consumers a-writhe!"

MODERN PACKAGING, Executive and Editorial Offices, 575 Madison Ave., New York 22, N.Y. Phone PLaza 9-2710

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OF MODERN PACKAGING®

to the packaging of such "awkward" solid items as fragile spaghetti. A converted machine ups production by 135%, cuts labor costs by 47%.

A production method update.

124 The eyes have it

Happy Pet Products uses a visual-testing instrument to break a packaging-committee deadlock on a choice of three surface designs for a new container. Result of this objective design appraisal: unanimous agreement.

A special interest in packaging sales effectiveness.

128 Packaging Institute Forum: The '60s

What's ahead for packaging in the new decade will be discussed at PI's 22nd annual session Oct. 31-Nov. 2 in New York. Here is a brief forum schedule and the complete program.

A special interest.

130 Throw-away in bulk

It pays to keep posted on consumers' changing buying habits. Consider the case of Kuehmann Foods, which reports a 500% sales increase since switching from a returnable can to a disposable bag-in-carton for bulk-quantity potato chips.

A special interest.

132 Hang-up plug closure

With no packaging change save the addition of a hangable polyethylene closure, Century Drill moves its line of handyman's products onto self-selection pegboards. Now sales are up 25%.

A special interest in packaging products.

TECHNICAL & ENGINEERING

135 Glue sealing with PE coatings

The increasing use of polyethylene-coated paper and paperboard in packaging accents the need for machinable, low-cost adhesives with high bond strength and good performance characteristics. Union Carbide studies show that these goals can be met by adding small amounts of animal glue to dextrin adhesive. *By Sherwood Leeds.*

139 Diagonally slotted containers

From Armed Forces Quartermaster research comes a new design for shipping cases that promises

benefits to commercial packagers as well. The sturdy shipper, handled on standard machinery, eliminates the need of a sleeve, for savings in material and labor costs. It also offers improved performance. *By John O. Younger.*

144 Testing for ultraviolet effect

A simple screening method is available to determine the effect of ultraviolet light on a package or its contents. It involves the use of transparent film containing an ultraviolet absorber that blocks UV rays, but transmits visible light. *By R. J. Holmes and A. C. Signore.*

146 Questions & Answers

Solutions to readers' technical problems.

The MODERN PACKAGING General Alphabetical Index for Volume 33, providing a complete reference to contents of all issues from September, 1959, through August, 1960, is now available free of charge to subscribers, but will be sent only on request. Please address requests for copies of the index to Readers' Service Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.

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The why and how of outstanding packages.

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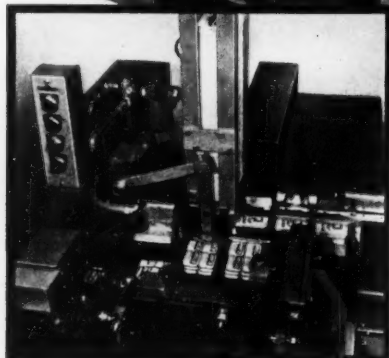
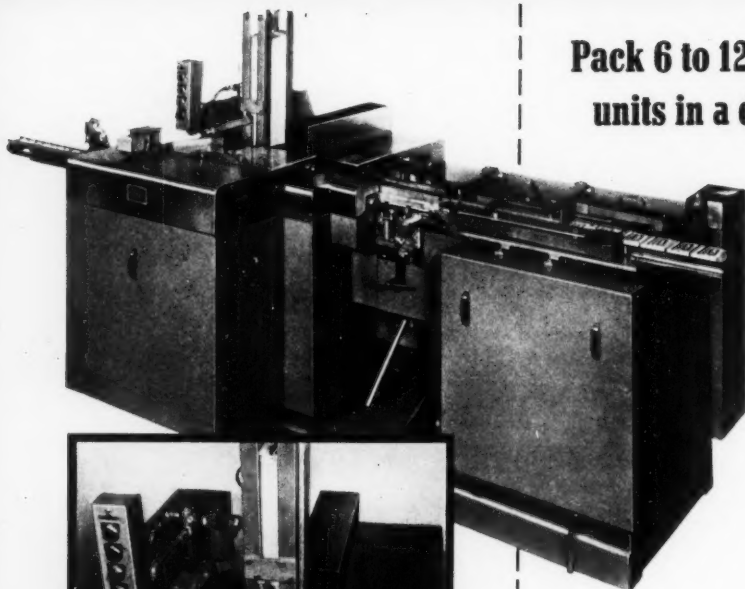
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236 Index to Advertisers

Use this guide to find news in the ads.

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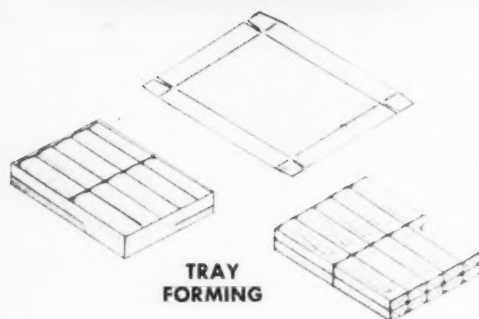
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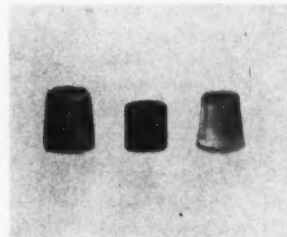
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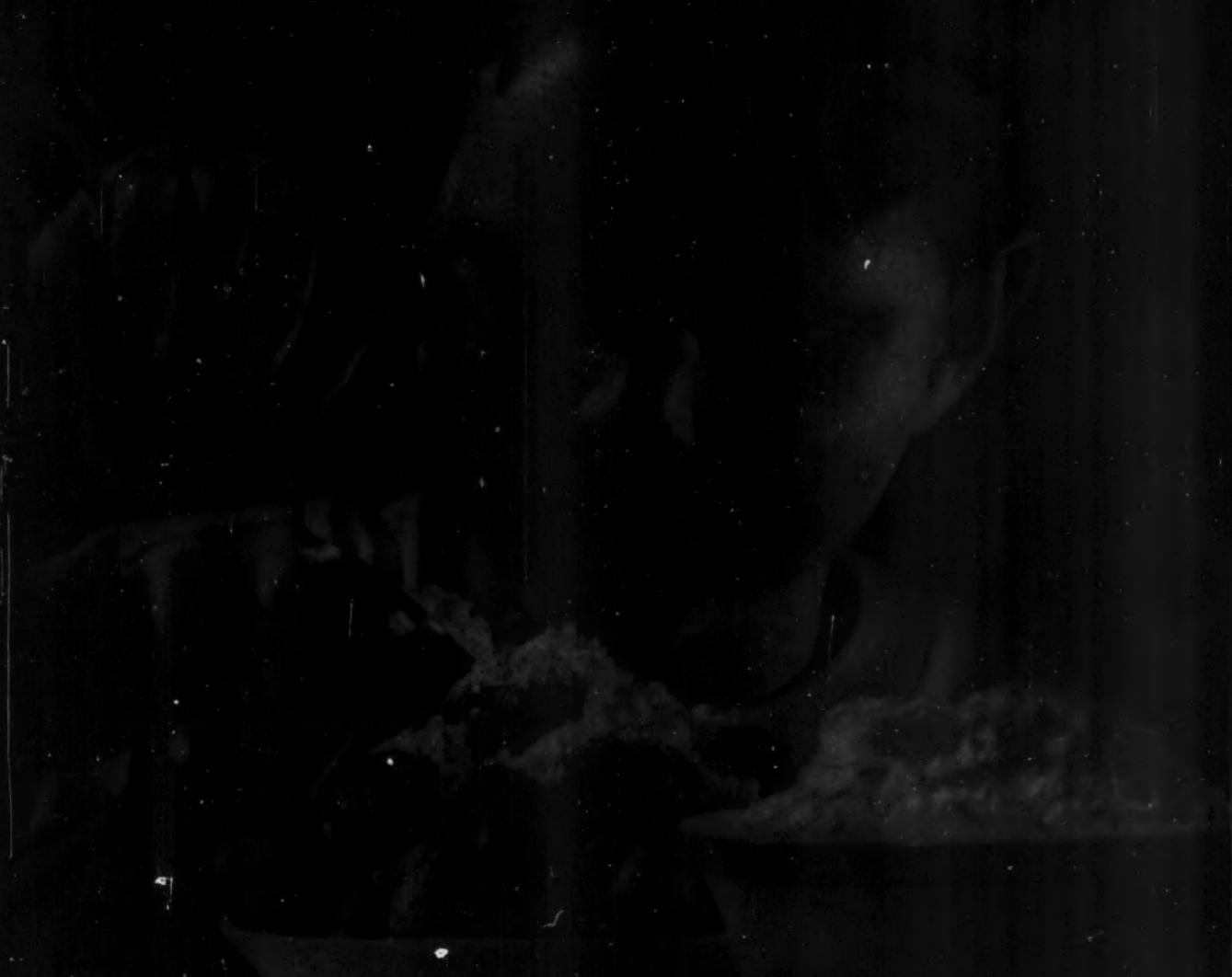
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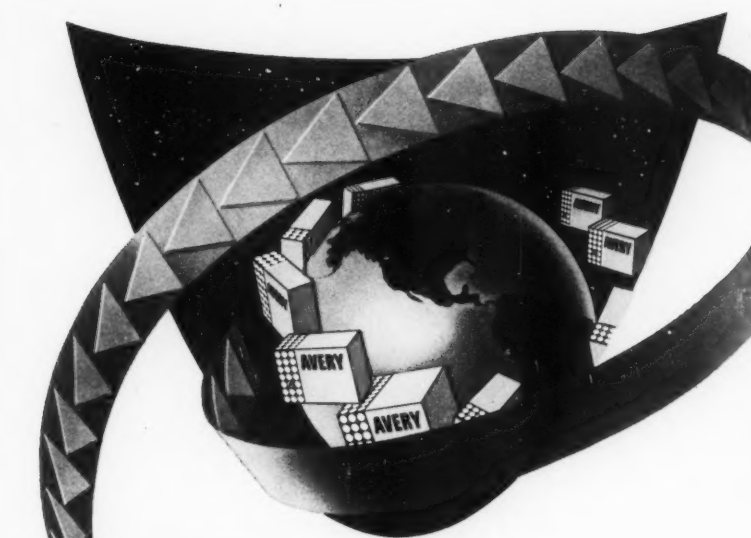


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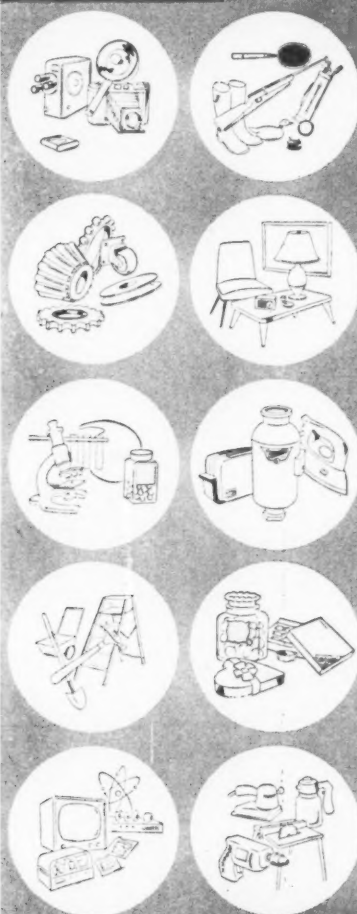
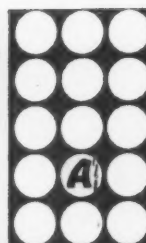


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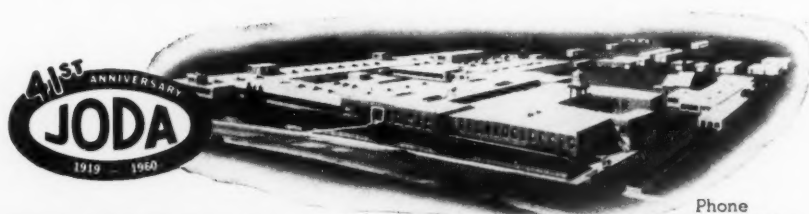


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◀ volumetric plate type fillers

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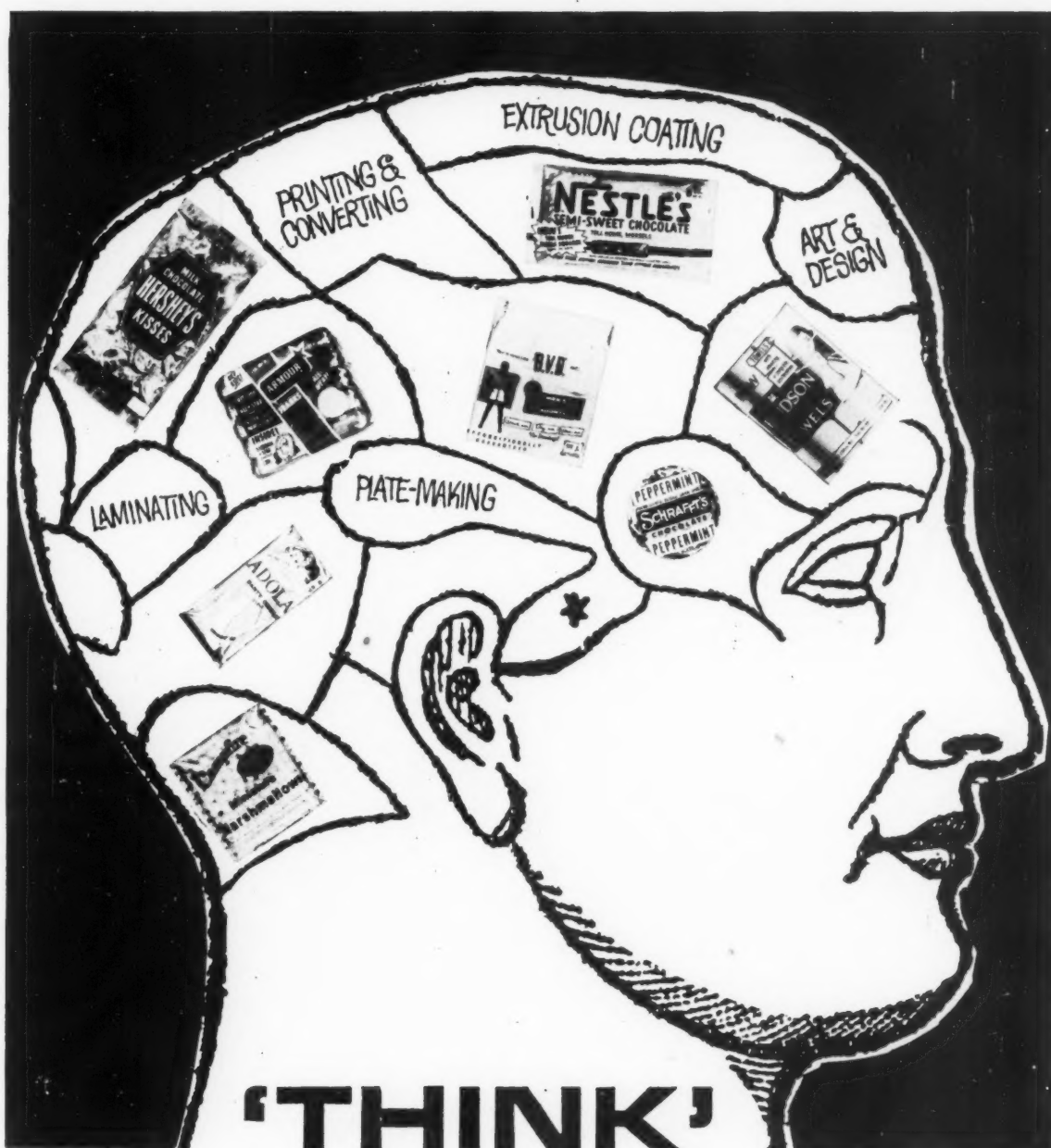
What makes a product belong? Acceptance by the consumer public . . . acceptance for the product itself . . . and acceptance for the container in which it is presented for sale. • A good product is greatly enhanced at the point of sale when presented in an attractive glass container . . . a glass container by Brockway. • Brockway provides individuality in a glass container . . . the kind of individuality that makes your product stand apart from all the rest, thereby providing a strong advantage at the point of sale. • A product that is worthy of consumer acceptance deserves a quality glass container by Brockway.



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You'll get added sales impact from Cellu-Craft's roster of closely-knit, flexible packaging services. Every product is precision-processed for maximum marketing impact...as film flows through the most modern facilities including Art, Plate-Making, Printing, Laminating, Extrusion Coating and further Converting. Call or write Cellu-Craft today for full details.

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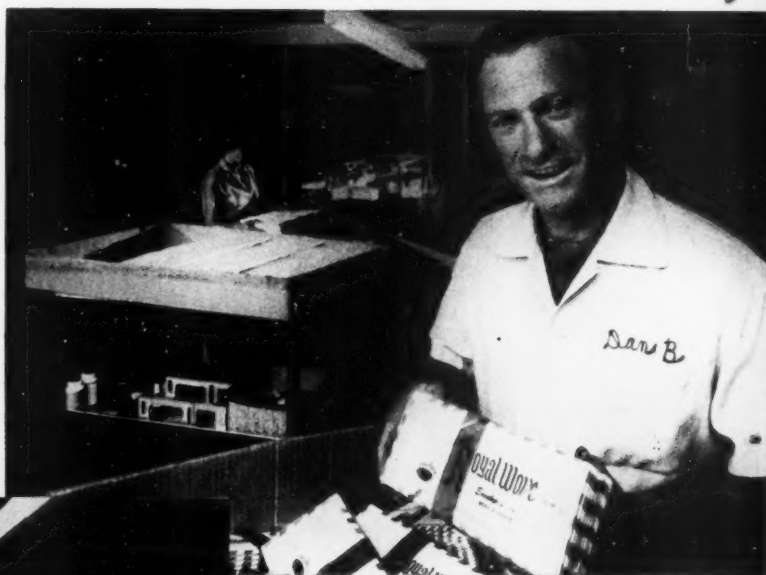


◀ **BETTER CUSTOMER SERVICE:**

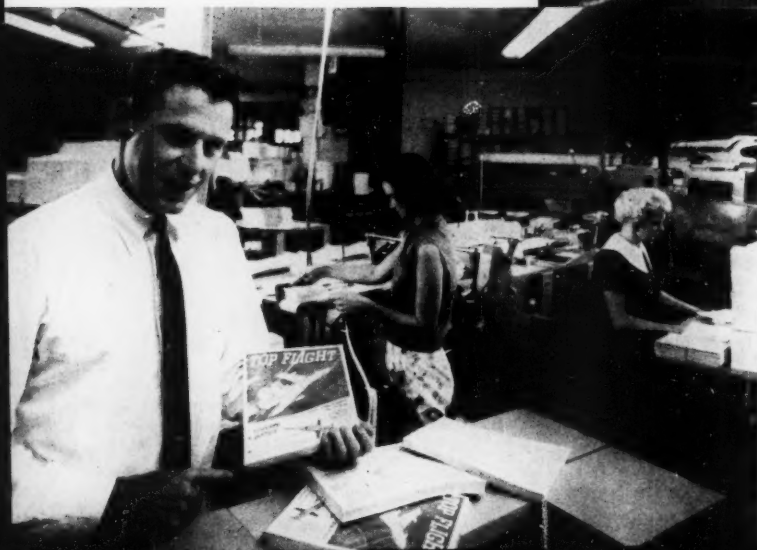
"We can now give our retailers the important handkerchief display quality of tray-pack gift appeal *plus* package durability... The excellent shelf life of polyethylene film also means we may keep a bigger inventory, thus provide better customer service," declares S. Trachtenberg, Packaging Director, I. C. Herman & Company, Inc.

They all save more, sell more, with

LOWER COSTS: "We went to polyethylene because it costs less than other transparent films... The results—no breakage, no returns—prove our decision was a smart one," observes Daniel M. Brown, General Manager, Royal Wove Envelope Co. ▶



◀ **HIGH SALES APPEAL:** "Polyethylene has transformed our packaging operations. Our product now maintains its original shelf attractiveness indefinitely. It stays new and fresh looking in our retail outlets, and has high sales appeal," reports E. Montgomery Robinson, Vice-President, Top Flight Paper Products, Inc.



LONGER STORAGE LIFE: "To handle peak season rushes, we make and store our paper plates in off seasons. Polyethylene wraps protect them without tearing or cracking. It saves us money," says W. E. Wilson, Mgr., Product Planning, KVP Sutherland Paper Company. ▶

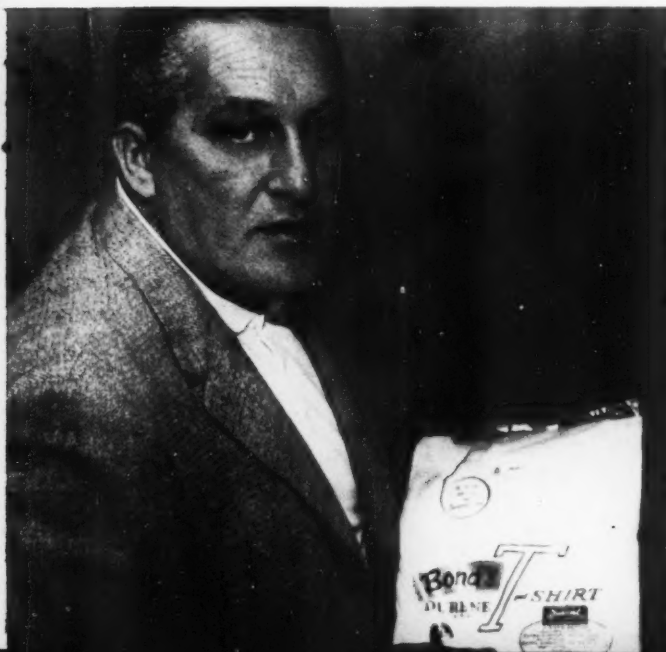


automatic polyethylene overwraps

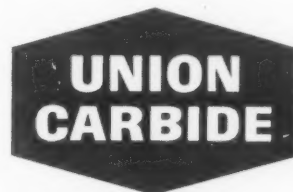
With one packaging decision, these consumer product manufacturers cut costs, extended product shelf life, reduced breakage returns, added visual and touch appeal, and boosted sales.

How? By switching to automatic overwrapping with tough, economical, sparkling, printable, transparent film made of BAKELITE Polyethylene.

Isn't it time you fully investigated automatic polyethylene overwrapping for your products? See your packaging supplier. Or write for our *two* special booklets on polyethylene overwrapping. Dept DV-86, Union Carbide Plastics Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y. In Canada: Union Carbide Canada Limited, Toronto 12.

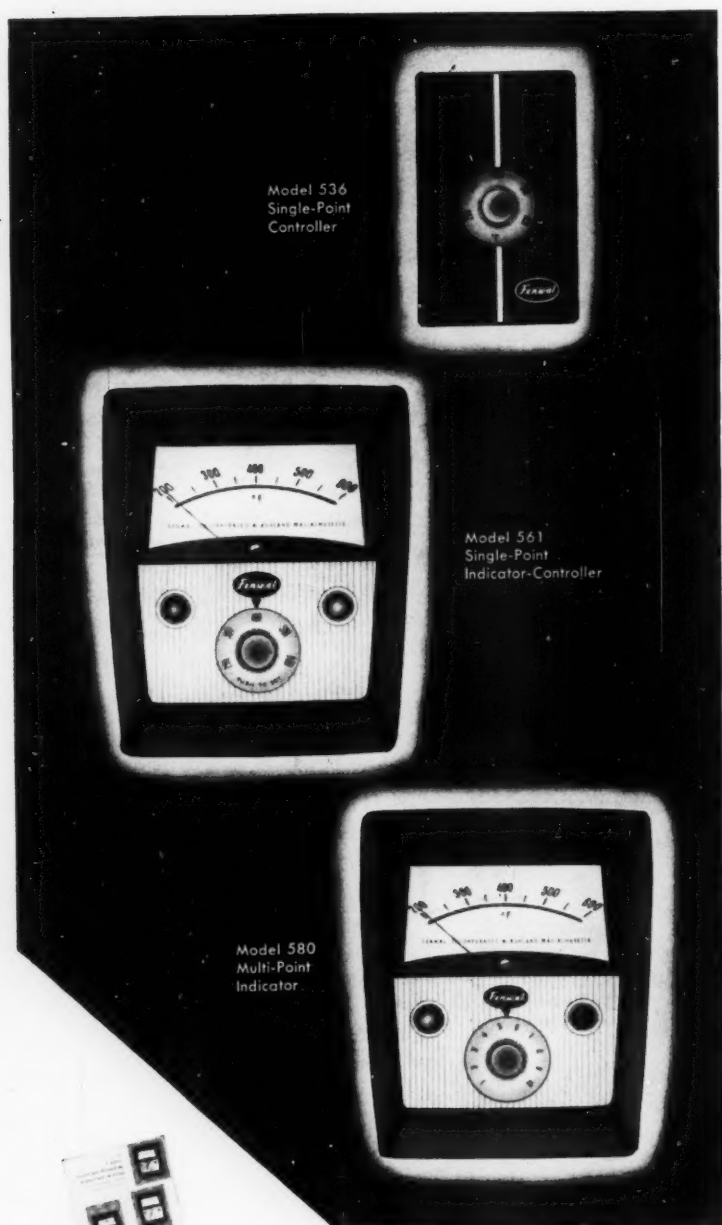


▶ **INCREASED SALES:** "We attribute a 15 to 20 per cent increase in sales directly to the appeal of polyethylene-wrapped garments over garments packaged in other materials," says R. Wise, President, Cinderella Knitting Mills, Inc.



BAKELITE and UNION CARBIDE are registered trademarks of Union Carbide Corporation.

NOW... Temperature Control Matched to Modern Packaging . . .



Model 536
Single-Point
Controller

Model 561
Single-Point
Indicator-Controller

Model 580
Multi-Point
Indicator

Here's the brand-new family of Fenwal Transistorized Temperature Controllers, ideally suited to the widely varying demands of modern packaging materials. These additions to Fenwal's "500 Line" permit *precise matching* of control instrument to application over a temperature range from -50 to $+600^{\circ}\text{F}$.

Thermistor sensors and rugged, reliable transistorized circuits assure long life and trouble-free operation . . . and eliminate lead wire problems. Every instrument is easily installed . . . in the plant or on the machine. Professionally styled cases and wide choice of colors blend with the most modern surroundings. And, best of all, advanced Fenwal design and production methods keep costs reasonable! Here are three examples:

The Model 536: reliable, single-point controller gives you these options: ON-OFF or proportioning control . . . set-point adjustment in the instrument or remotely located . . . indication as well as control . . . expanded scales for fine temperature adjustment. And you pay only for the option you need. Capacity of 10 amp/110 VAC and 5 amp at 230 VAC.

The Model 561: single point indicator-controller designed for panel mounting. Panel button permits meter display of temperature set point. Control and indication circuits are independent. Mirror-backed scale prevents parallax, tilted glass cover reduces reflection. Option of either ON-OFF or proportioning control. 10 amp/110 VAC relay capacity . . . insensitive to voltage fluctuations.

The Model 580: multi-point indicator permits "flick of a switch" indication of 2 to 10 temperatures controlled by up to ten Model 536 controllers.

These are just the high spots. For complete details on this versatile Fenwal family, send for bulletin MC-190, "Smarter Looking Smarter Acting Electronic Temperature Controls." FENWAL INCORPORATED, 535 Pleasant Street, Ashland, Mass.

Another
example of how



CONTROLS TEMPERATURE . . . PRECISELY



YOUR NEXT MAYOR

HONESTY IN BROWN



METRO ^{IS} **FOR** *the people's choice*

Every year is election year at Metro! And, our winning slogan has always been — and remains — **service**. Every company that votes for Metro, votes for glass containers that dramatize, complement and help sell their products. Whether your sales platform is drugs, food or spirits, Metro replaces the headache of "maybe deliveries" with sure thing deliveries . . . Metro replaces a glass container with **the** perfect glass container . . . Metro replaces guessing with research. Metro gives you what you need — when you need it. The super service that spells **Metromatic!**

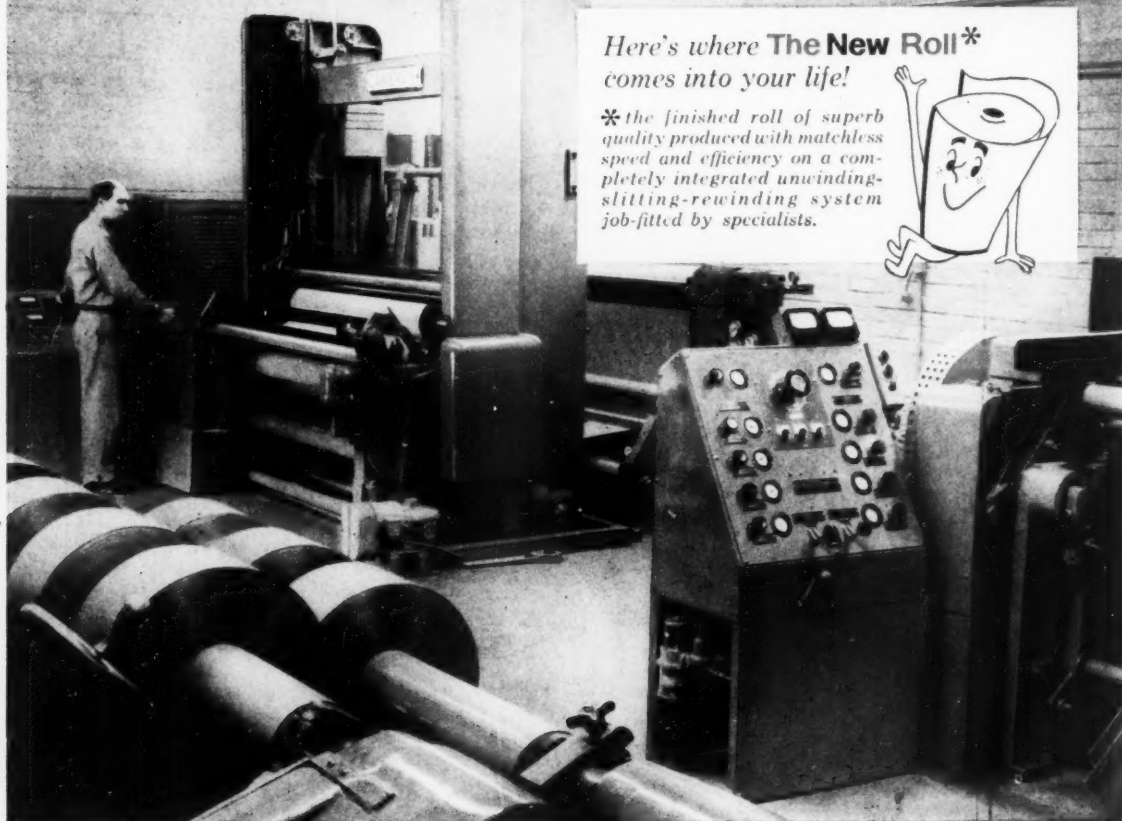


MANUFACTURERS OF QUALITY GLASS CONTAINERS

METRO GLASS

DIVISION NATIONAL DAIRY PRODUCTS CORPORATION
GENERAL OFFICES: JERSEY CITY 3, NEW JERSEY

CAMERON RESEARCH AND DEVELOPMENT SERVICE



Here's where **The New Roll***
comes into your life!

* the finished roll of superb quality produced with matchless speed and efficiency on a completely integrated unwinding-slitting-rewinding system job-fitted by specialists.



NOW...see and try before you buy

SLITTERS • ROLL WINDERS • UNWINDS • WEB CONTROLS

Test-run your materials on a job-fitted "pilot" roll production system, perfectly integrated from unwind to rewind, engineered by specialists to meet your most exacting requirements—to give you **The New Roll!**

Since its introduction the unique Cameron Research and Development Service in Dover, N. J., has produced successfully integrated roll production systems to meet the highly specialized requirements of hundreds of different users. Each problem has presented its own peculiar set of conditions. The materials involved have

ranged through all types of papers, films, foils, laminates, impregnated fabrics and miscellaneous flexible web materials in rolls of all sizes.

Cameron Research and Development Service has provided, for the first time anywhere, the opportunity for you to *see and try* combinations of equipment *integrated* to meet your needs; duplex combination winding, duplex center winding or two-drum winding; score-cut, shear-cut, razor-cut, or hot knife slitting; shaft-type or shaftless unwinds; various types of tension sensing systems with electronic or air-operated edge guides;

continuous duty unwind brakes with torque capacities to meet the widest range of production requirements; plus many new auxiliary devices.

Here is the Cameron Team of Specialists at work, concentrating matchless facilities and experience on your test runs, to bring you outstanding economy, productivity and quality in your roll production system. Here is where *The New Roll* comes into your life!

We suggest that you call or write today so that we may schedule your test runs for the earliest available time. Get *The New Roll* now!

CAMERON

a team of specialists

AA-383

54 years devoted exclusively to the design and manufacture of slitting, roll winding, unwind and web control equipment.

Cameron Machine Company, Franklin Road, Dover, N. J.

Canada: Cameron Machine Co. of Canada, Ltd., 14 Strachan Ave., Toronto, Ont.

France: Cameron Europe S.A., 5 Rue de Prony, Paris (17e) France

Brazil: Cameron Maquinas Ltda., Rua 24 de Maio, 104-5, Sao Paulo, Brasil
famous TIDLAND pneumatic shafts are sold exclusively through Cameron

BARTELT

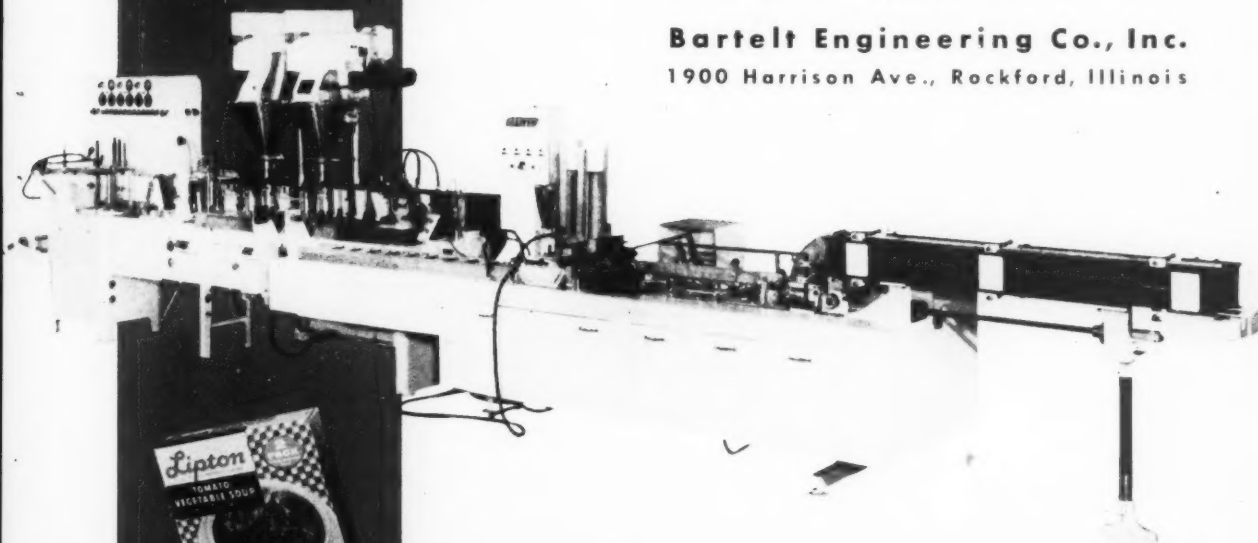
**packaging machinery
is on the job for...**

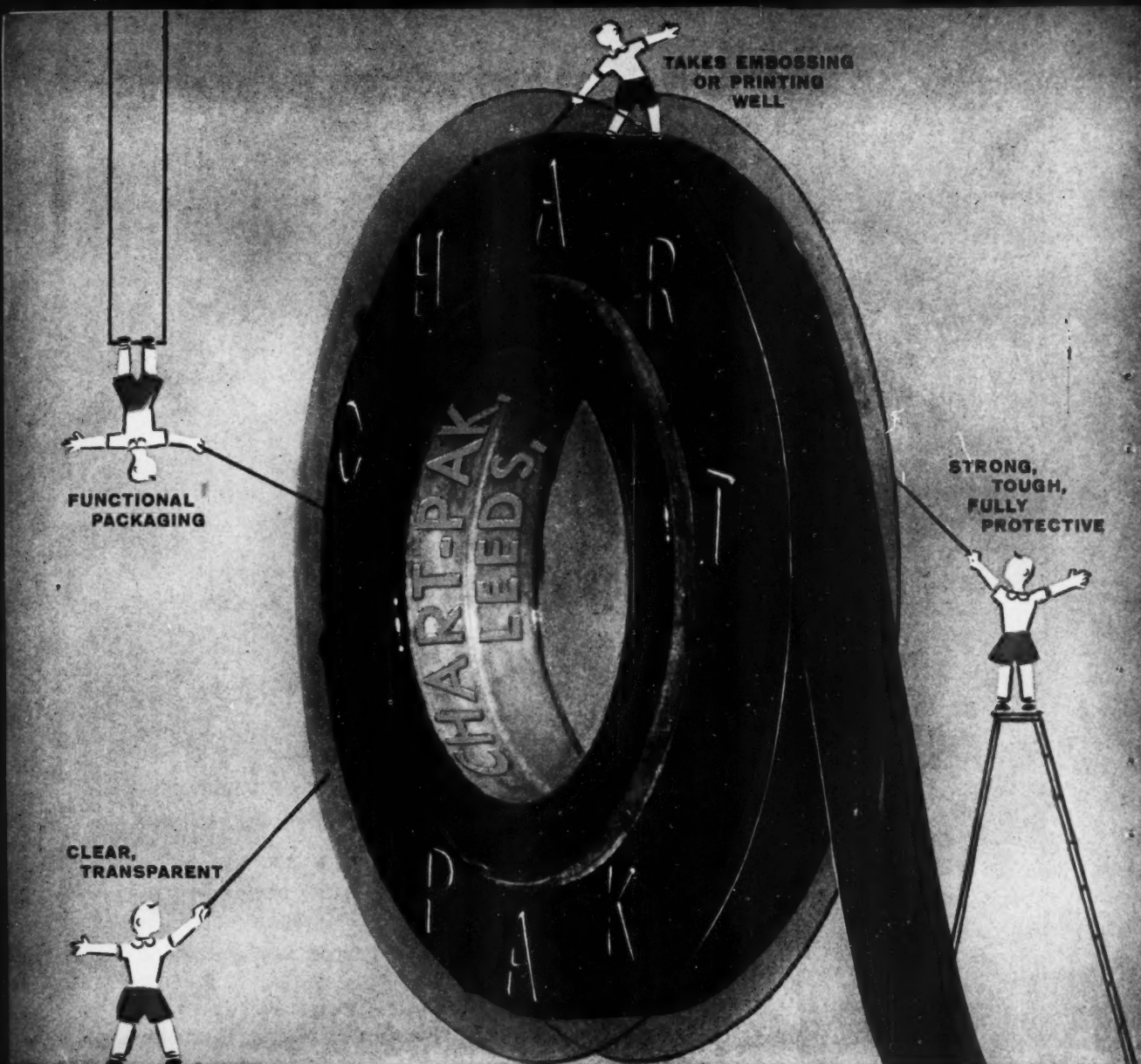
Lipton

Lipton Soups . . . family favorites, because of their savory home-cooked taste, the new mix way . . . go to market protected by packages of the highest standards . . . packages fabricated automatically by Bartelt Packaging Production Lines.

Bartelt has specialized in custom designed packaging machinery . . . and only packaging machinery, for more than a decade. There is no substitute for creative engineering . . . based on solid experience . . . when only the best is good enough.

Bartelt Engineering Co., Inc.
1900 Harrison Ave., Rockford, Illinois





Dispenser-Reel designed and manufactured by William A. Crook Company, Inc., Watertown 72, Mass.

NEW TRANSPARENT ACETATE DISPENSER-REELS MAKE CHART-PAK TAPES EASIER TO USE...AND SELL

Here's packaging with a purpose! A handy new Chart-Pak dispenser-reel, thermoformed of Celanese Acetate Sheet. ■ Far more efficient than the old-style envelopes, the functional, crystal-clear acetate dispenser guides the tape smoothly during use . . . protects against soiling . . . keeps tape completely visible, ready to use.

■ Celanese Acetate is perfect for sales-wise packaging. It's strong, transparent, has excellent non-aging characteristics, takes printing well. And it is low in cost.

■ Our experienced technical representatives will be glad to help with any aspect of transparent packaging. To have one call on you promptly, contact: Celanese Plastics Company, Dept. 208-J, 744 Broad Street, Newark 2, N. J.

Celanese ®

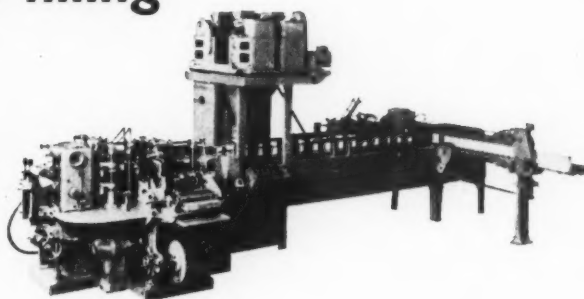
Acetate . . . a *Celanese* plastic

Celanese Plastics Company is a Division of Celanese Corporation of America
Canadian Affiliate: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver
Export Sales: Amcel Co., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16.

Chart-Pak pressure-sensitive tapes, available in a variety of designs and sizes, make professional looking graphs and charts a snap to prepare.



Get fast accurate filling with **SIG**^{*} Double-Package Makers



If you package dessert powders, cut macaroni products, cereals, dried vegetables, etc. in folding cartons with inner-liners or overwraps, investigate SIG line Double-Package Makers. You will discover this world-famous line can improve your packaging and substantially reduce your costs. Here are some of the advantages you'll get:

Top Speeds—Makes, fills and seals up to 80 packages per minute from approximately 3 oz. to 5 lbs.

Versatile—Models to handle almost any free-flowing or non free-flowing powder or granular product with choice of three filling methods—net weight, volumetric, gross weight with auger feed.

Air-Tight Package—Inner bag formed on exclusive twelve-mandrel system for continuous, unbroken vertical seals . . . and closed independently of carton by heat sealing, glue or with neat, accordion style top fold for easy reclosing. Handles paper, glassine, Plio-film, cellophane or laminated materials from roll stock. Cartons with glued flaps or tuck-lids formed and sealed from flat blanks. Overwraps from roll stock registered photo-electrically.

Dependable—All models are exceptionally high efficiency, low maintenance machines . . . proven in modern food plants the world over.

**SIG is the trademark of Swiss Industrial Company, Switzerland . . . for over five decades a world leader in precision engineered packaging machines built with unsurpassed skill.*

Putting Ideas to Work



FOOD MACHINERY AND CHEMICAL
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For packaging that's a



pleasure to pick up

MARATHON
has the answer

Every package you see here caters to her craving for convenience. In some cases she finds the package easier to carry; in others—easier to serve from, cook in, or store in her refrigerator.

These typical Marathon serve-a-need packages partially explain why Marathon is the leading supplier of food packaging. But designing shopper convenience into paper, paperboard, film and foil packaging materials is only part of it.

Before she sees, or uses, a Marathon package, you can be sure it was filled at low cost. If you have questions concerning costs of "convenience" features for your packages, just remember: *Marathon has the answer*. Marathon, A Division of American Can Company, Menasha, Wis. In Canada: Marathon Packages Limited, 100 Sterling Road, Toronto 3.



For packaging...and ideas...

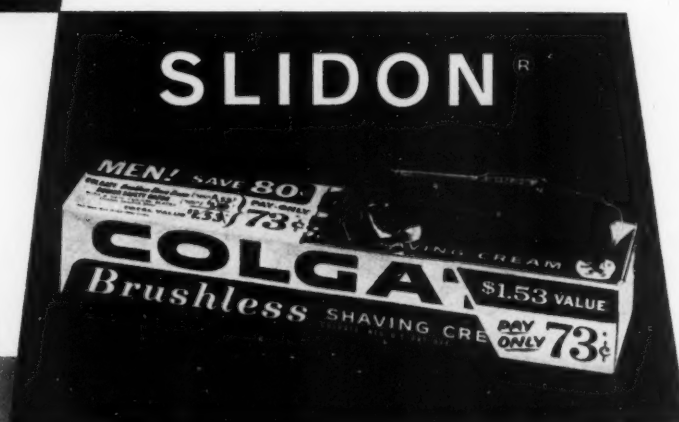
you can't beat **marathon** 

DOMEPAK[®]



COLGATE'S ingenious cardboard display package employs P.A. DOMEPAK to "show case" razor and blades. DOMEPAK flanges are held between plies of cardboard without adhesive.

Special application of Plastic Artisans' SLIDON holds and displays Schick razor and blades on Colgate shaving cream box.



DOMEPAK and SLIDON transmit the "buy now" idea full force at first glance. Colgate, like others, found this P.A. packaging technique best for their new "tie-in" bargain.

Can Plastic Artisans add sales-magnetism

to your product? P.A.'s display packaging will show you how. Backed by 20 years experience, P.A.'s specially-equipped, continuous-production plant and skilled personnel can give you packaging assistance from design to consumer.

Send for Plastic Artisans' booklet "Display Packaging" or ask to have a representative call.



PLASTIC ARTISANS, INC.
Dock Street & Martin Place Port Chester, N. Y.

CUSTOM-DESIGNED, MASS-PRODUCED PACKAGES, PACKAGE COMPONENTS, SAMPLING DEVICES, ETC. IN CLEAR, OPAQUE AND COLORED PLASTIC.

PA-127

Trigger A Buying Impulse

The wide range of properties available in Eastman's series of low-molecular-weight polyethylene resins provides formulating flexibility never before possible. With the addition of three new resins (Epolene LVE, HDE and HD), formulators and coaters of paraffin waxes can now choose from among seven different types to achieve that combination of properties which best meets the requirements of the paper and packaging industries.

Epolene polyethylene improves the properties of paraffin blends in these ways:

- reduces flaking
- increases toughness
- increases abrasion resistance
- improves adhesion
- improves resistance to thermal shock
- increases mileage
- raises blocking temperature
- improves gloss

Each type of Epolene polyethylene contributes, to a greater or lesser degree, to the improvement of each of these properties. Thus, through selective blending, you can formulate waxes of optimum performance for your equipment and service.

Epolene E oxidized • In general, the oxidized Epolene resins improve the adhesion of paraffin blends to a greater degree than do the non-oxidized types. Among the oxidized types, Epolene E is superior in this respect, and in its ability to increase the softening point of paraffin blends.

Epolene LVE oxidized • When good adhesion and a low cloud point are important, Epolene LVE should be considered as a component in paraffin blends.

Epolene HDE oxidized • This is the first high-density, oxidized low-molecular-weight polyethylene available. Epolene HDE is suggested for use in wax blends that must exhibit good adhesion and mileage.

Epolene N non-oxidized • Epolene N contributes maximum hardness and high tensile strength to paraffin blends. It also enables coaters to obtain excellent mileage.

Epolene LV non-oxidized • Epolene LV is one of the easiest to handle among the low-molecular-weight polyethylene resins, because of its low melt viscosity. Paraffin blends containing Epolene LV also exhibit low viscosities at application temperatures, and relatively low cloud points.

Epolene HD non-oxidized • Epolene HD is the hardest of all the low-molecular-weight polyethylene resins, yet is easy to handle due to its low melt viscosity. It produces paraffin blends that have high softening and blocking temperatures.

Epolene C non-oxidized • Epolene C, a unique polyethylene resin, has the highest molecular weight and lowest density of all the resins in the Epolene series. Contributing maximum tensile strength in conventional blends, Epolene C is also being used to advantage in coatings in which it is the principal component.

If you are using low-molecular-weight polyethylenes in your wax formulations, or are considering their use, investigate the complete Epolene series. Your Eastman representative will gladly explain the advantages of each of the resins in the series and will show you how to realize the most profitable use of them in your formulations. Write today for more information.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Chicago; Cincinnati; Cleveland; Detroit; Framingham, Massachusetts; Greensboro, North Carolina; Houston; New York; Philadelphia; St. Louis. **West Coast:** Wilson Meyer Co., San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

Eastman now offers formulators and converters 7 basic types of polyethylene

New Epolene resins
broaden formulation range
of wax coatings

Physical Properties of 2% EPOLENE-Paraffin Blends
(130° AMP Paraffin)

PROPERTY	EPOLENE TYPE						
	E	LVE	HDE	N	LV	HD	C
Density *	0.938	0.939	0.956	0.928	0.925	0.938	0.907
Viscosity, cps.	4.8	5.5	5	5.2	4.3	5.4	5.2
Ring and Ball Softening Point, °F.	145	138	140	140	140	145	139
Penetration Hardness, 0.1mm.	15	11	11.5	15.6	13.9	13.9	13.3
Adhesion, Psi.	13.5	13.5	11	8	8.5	5.5	10.5
Cloud Point, °F.	174	165	183	185	176	190	170
Consumption, G./100 in. ²	3.79	4.49	3.29	3.69	3.86	4.71	4.32
Tensile, Psi.	455	435	280	470	465	355	470

*Density of unblended Epolene

Epolene®

EASTMAN low-molecular-weight
polyethylene resins

TIME 0:02



Seconds that count in the life of your package

You are looking at the most critical seconds in the life of your package.

When the case is sealed, your investment in product development, manufacture, packaging and merchandising are bonded with a film of adhesive thinner than newsprint. The right adhesive at this time is the way to be sure of the arrival of your product at the point of use in perfect condition. Armour Packaging Adhesives can do exactly that kind of a job for you.

Because Armour is a leading manufacturer of adhesives and one of the nation's largest packagers, we maintain a large staff of chemists and technicians skilled in the development and application of packaging adhesives. The Armour technical staff is ready to work with you, in your plant and in the Armour Laboratories to make the critical seconds count for top package performance and production economy.

You can put Armour on your packaging team by contacting your local Armour man or our sales headquarters. Armour Alliance Industries, Adhesives Division, Alliance, Ohio.



SEBAN

Liquid Polyvinyl Resin—ready to use. Special series for carton sealing, case sealing, straight line and right angle gluing, tube winding, window boxes, bags, labels, carrying cartons, laminating, bookbinding, glue-lap.



DRIFLEX

Formulated dry granular animal glue-based adhesive. Available in several grades for high speed paper box operations where rapid tack and non-warp characteristics are required. Also for luggage case-covering, folding-carton and bookbinding. Converts rapidly, has indefinite storage life. Foam-free.



FLEXGLU

Formulated cake-type animal glue-based adhesive. Available in many grades for set-up boxes, bookbinding, case-covering, laminating and luggage. Converts rapidly. Free from foam with good non-warp characteristics. Wide working ranges and sets.



ARMODEX

Liquid dextrin-based formulation. Available in many ready-to-use and dilutable grades for semi-automatic and automatic filling operations, high speed, right angle and straight line gluing, spiral and convolute tube winding, kraft bag side seam and bottom gluing, laminating and palletizing.



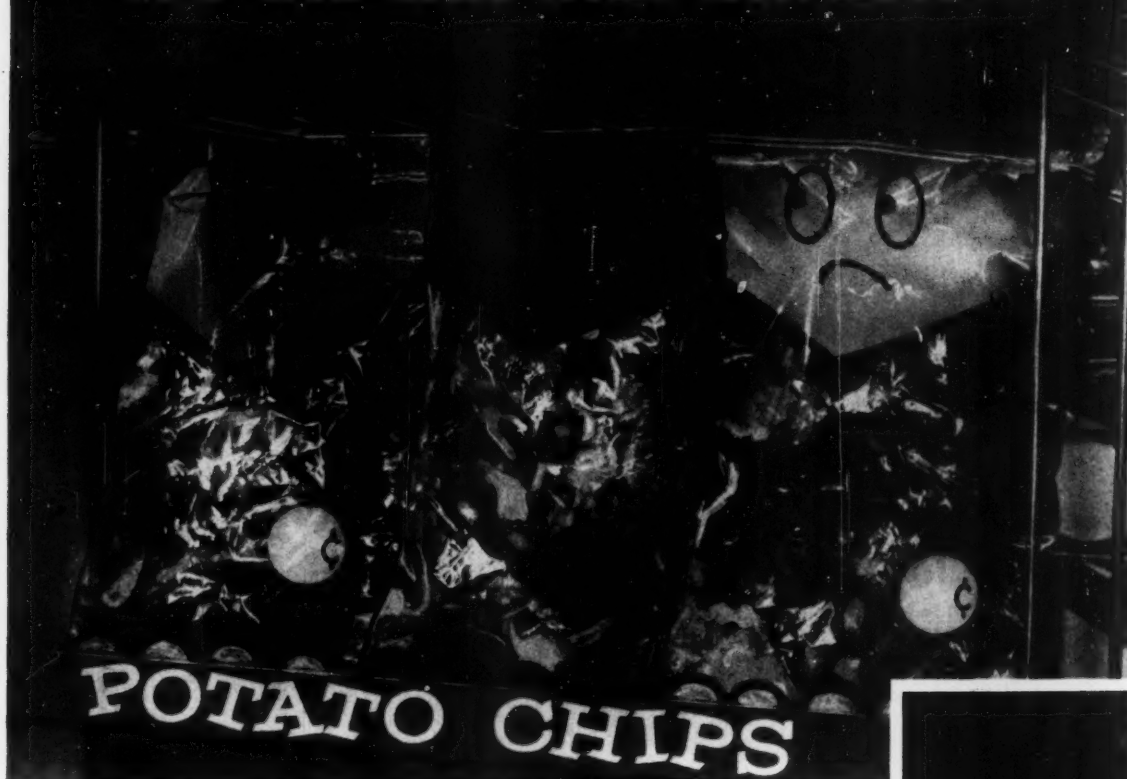
ARMOGLU

Formulated animal glue-based adhesive. Available in liquid and jelly forms for folding cartons, woodworking, gummed tape, and binder for non-woven fabrics.



ADHESIVES DIVISION
ARMOUR ALLIANCE INDUSTRIES

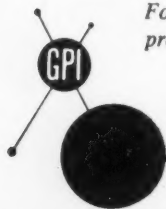
It's the Ink that attracts...



and the ink you'll see is...

BBD FLEXOGRAPHIC INKS can help your product, package or promotion to higher sales because BBD inks are developed and tested in modern research laboratories to assure you of superior trouble-free performance. Years of field experience with BBD flexographic inks have proved their superiority on standard flexible packaging materials . . . or on custom applications. Why not get acquainted with BBD's line of modern flexographic inks . . . and the down-to-earth service that goes with them. You'll appreciate both.

For more information on any BBD product, please call or write:



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Sun Chemical Corporation

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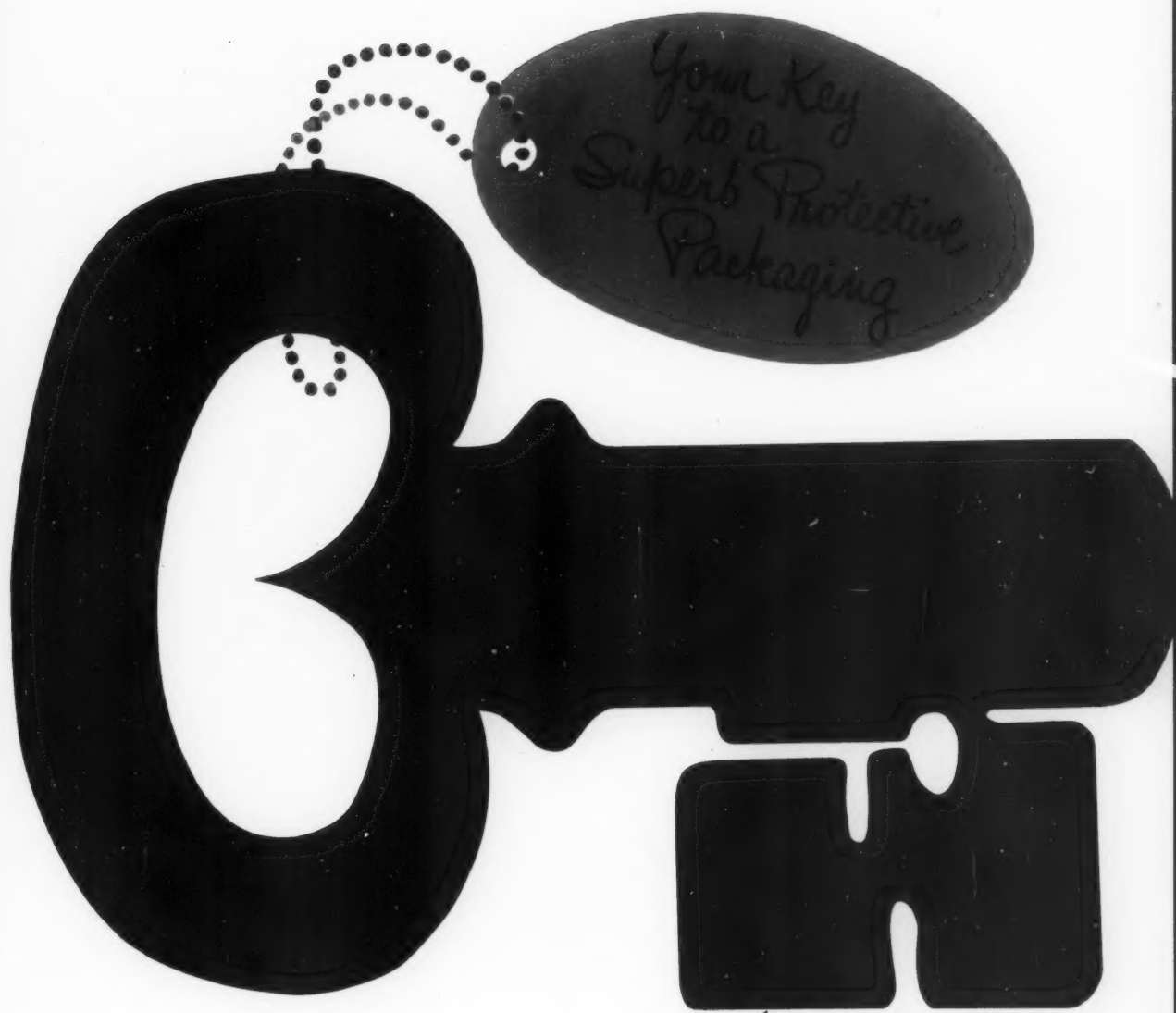
	Paper	Metallic Paper	Barium Sulfate Paper	Phosphoric Acid (Treated)	Aluminum Foil	Paper & Board	Glassine	Plastic	Barium Sulfate	Polystyrene	Acetate	Other & Other
ACETOPAK												
EXCELLOPAK 400 X-TRA	•	•		•	•	•						
FLEXOKRAFT						•	•					
FOILBRITE				•								
THERMOFAST		•										
TRANSLUSTRO						•	•					

DOUBLE DUTY INKS for FLEXOGRAPHIC or GRAVURE PRINTING

	Paper	Metallic Paper	Barium Sulfate Paper	Phosphoric Acid (Treated)	Aluminum Foil	Paper & Board	Glassine	Plastic	Barium Sulfate	Polystyrene	Acetate	Other & Other
HYDROTRON						•						
MUL-T-BRITE	•	•	•	•	•	•						•
PLIOPAK								•	•	•	•	
VELVATX						•	•					

Depending on end-use and grade of stock





FOR PRODUCTS WITH
**HARD-TO-GUARD
FLAVORS**

PLIOFILM

TEC

RAY-BAN BUTTER WRAP

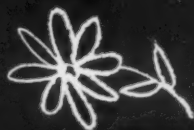
- Preserves flavor in normal refrigeration for longer as filtering infrared range of light, reducing the effect on oxidation of butter oils
- Great moisture in, prevents leakage
- Prints beautifully
- Greasproof
- Performs well on butter packaging equipment
- Costs less because of maximum film yield per pound

STRETCH-LAMINATED PLIOFILM—



You name it





LAMINATION...

*For lasting
low-cost
flavor protection*



RAY-BAN™

*KVP Superseal Paper and stretch
laminated PLIOFILM combine to
provide the real better wrap*

Quick facts on the PLIOFILM STRETCH LAMINATION PROCESS

Stretch lamination is a process developed and patented by Goodyear. It consists of heating and stretching Pliofilm to thin gauges while retaining its desirable qualities.

Stretch lamination can be effected by using wax, latex or solvent-type adhesives. Choice of adhesives depends on end use.

For heat-sealed pouch type—solvents or latex type of adhesives are recommended. For non-heat-seal application, where low WVTR and gas diffusion are needed, wax adhesives are recommended.

The thin gauges achieved by the stretching process are combined to create scratch-free, grease-resistant lamination.

PLIOFILM is a registered trademark of Goodyear.

Lots of good things come from

GOOD YEAR





You name it
We'll protect it with a low-cost
PLIOFILM LAMINATION



**A PLIOFILM
Lamination Gives You
These Vital Advantages**

- 1. PRODUCT PROTECTION.** PLIOFILM is pin-hole-free—makes a gastight package to maintain product quality. Seals nitrogen in—oxygen out.
- 2. PACKAGE PROTECTION.** Unusual grease resistance of PLIOFILM prevents delamination and package staining.
- 3. MACHINABILITY.** PLIOFILM heat-seals faster over a wide range of temperatures to a positive welded seal.
- 4. LOW COST.** PLIOFILM actually reduces packaging costs because it cuts waste in product and packaging materials—results in fewer package rejects.

To find out what a PLIOFILM Laminated package can do for you, call your Goodyear Packaging Films Engineer, or write: Goodyear, Packaging Films Dept., V-6418, Akron 16, Ohio.

Good things are better in PLIOFILM

by **GOOD  YEAR**

Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio



Want more profit from your Packaging Operations?

**... without replacing present equipment,
or building a new plant,
or even hiring new people!**

- Check your adhesive. That's where some profit opportunity lies. Because the adhesive is one of the controls that govern your rate of production. And production is profit. Obviously, the more production you can get from your present packaging setup, the more profit you will earn.

Therefore, the speed, machine-ability and tack of your adhesive are vital. Your adhesive must do much more than just "adhere".

Swift's new high speed resin adhesives have stronger tack with better machine-ability. And what's more, they have higher strength and greater resistance to moisture as well! Swift's

23 adhesives plants produce a complete line of packaging adhesives for the most specific applications—prompt, courteous, and authoritative service throughout the United States and Canada.

Be sure your packaging adhesive is helping your profit. Call your Swift Adhesive Specialist for all your adhesives. Or write for additional details to Swift & Company, Adhesive Products Department, Chicago 9, Illinois.

*To Serve
Your Industry Better*

WITH THESE ADHESIVE PRODUCTS

RESINS AND RUBBERS IN EMULSION OR SOLVENT
DRY, LIQUID AND FLEXIBLE ANIMAL GLUES •
LIQUID DEXTRIN ADHESIVES





Meet our mechanical man

Bill Jacobi has been fighting packaging inefficiency since the days of string tying.

Some day he hopes to win. Many claim he already has. Particularly users of Union-Camp shipping containers.

It's easy to understand why. As a result of putting some of his automation ideas to work, these companies have saved thousands of dollars in reduced handling and labor costs. To say nothing of increased production rates.

According to Bill, who's Director of our Package Engineering Department, packaging costs are like an iceberg. Only the top portion—or surface costs—can be seen. This is represented by the packaging materials.

It's the hidden costs that cause the trouble. These sizable expenses take the form of filling, handling, weighing, maintenance, labor, closing, warehousing and product damage. And it takes an expert to analyze them and make recommendations that will keep them to a minimum.

This is precisely the type of service Bill

and his team of specialists provide. Their studies cover inventory control. Plant layout. Filling and handling techniques and equipment. Manpower expense. Adaptability of containers to palletizing as well as to present (and anticipated) traffic flow. In fact, anything that contributes ultimately to reducing the unit-packaging-cost of the product—whether it's applesauce or appliances.

As Bill puts it, "In today's profit-squeeze economy, one of the only avenues left for achieving significant savings is through more streamlined packaging and handling of the manufactured product. It's an avenue well worth exploring."

If you agree, he'll be glad to explore it with you. There's no obligation. Just drop us a note on your letterhead.

 **UNION-CAMP®**
CORRUGATED BOXES

Union Bag-Camp Paper Corporation, 233 Broadway N.Y. 7 N.Y.

Plants: Savannah, Georgia · Trenton, New Jersey · Chicago, Illinois · Lakeland, Florida · Spartanburg, South Carolina · Jamestown, North Carolina
Subsidiaries: Allied Container Corporation, Dedham, Massachusetts
The Eastern Box Company, Baltimore, Maryland.



Here's that cap again!

More and more packers are using Armstrong's new, improved metal cap. Here, it tops a famous salad dressing . . . seals in delicate flavor.

This is the cap that's setting new filling line standards, thanks to the tightly rolled, kink-free

bead . . . the deep, smooth thread. The result of two years of planning, research, and retooling, it's ideal for your next package. Planning it now? Perhaps we can help you — with closures (and containers!). Armstrong Cork Co., Lancaster, Pa.

Armstrong PACKAGING

1860-1960 Beginning our second century of progress

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV

Background for Packaging

Polyethylene price cut of 5 cents a pound by resin producers (see "Price Cuts Announced for Polyethylene Resins and Film," p. 223) requires a new look at the competitive positions of all packaging films. Already, one producer of a medium-density cast polyethylene film has announced reduced prices which will provide 1,000 sq. in. of 1 $\frac{1}{4}$ -mil film for 2.66 cents. This compares with 3.18 cents for the 300 MS heat-sealing type of cellophane, with which the cast polyethylene competes in clarity and in stiffness. Prices cited are less converter discount. Polyethylene producers see this as the first real opportunity for their film to compete with cellophane—not only on lower price, but in ease of handling on high-speed packaging machinery.

Liquor industry is split by move, headed by Schenley, to permit new odd sizes of bottles. Proposal is to allow, in addition to the eight present legal sizes, a $\frac{1}{3}$ gal., a $\frac{1}{6}$ gal., a $\frac{1}{12}$ gal. and a $\frac{1}{20}$ gal. Permission is required from the Internal Revenue Service and the petition is strongly opposed by the Distilled Spirits Institute, which claims to speak for 70% of the industry. Institute fears that the slight size differential between a "fifth" and a "sixth" would deceive buyers and confuse the industry's whole price structure. Packagers in all industries should watch: Consumer groups are vocal against "deceptive" size changes in any product. (See *Editorial Memo*, p. 93.)

Significant development in paper milk containers is forthcoming switch of the Pure-Pak type from wax to polyethylene coating. Large-scale tests in dairies in Johnstown, Pa., and Rochester, N. Y., are reported highly successful, requiring only a conversion of container machines already in use, and program schedules are now being set up for conversion of other machines across the country. Cost differential between waxed and polyethylene-coated cartons is said to have been substantially reduced, making the switch practical. Finer printed surface of the polyethylene-coated container is a merchandising advantage.

Lightweight glass bottles are getting so lightweight that some consumers believe they are plastic. The unlikely story (in a leading business magazine) that Pepsi-Cola was being packaged in plastic stemmed from Pepsi's market testing of the new, squat, ultra-light, one-trip glass bottle identical to that now being used on many brands of beer. Similar reports of plastic bottles arose during World War II, when GIs abroad were supplied beer in the first "throw-away" glass bottles—considerably heavier than the 1960 model. *Note:* Pepsi is also using cans and is carefully comparing the economies of the two types of single-trip package.

One-trip developments are paying off handsomely for both can and bottle makers. The use of cans for soft drinks was up 40.4% in May this year as against May, 1959; among all products, soft drinks in May were the eighth largest users of cans. At the same time, the Glass Container Mfrs. Institute reports June shipments of no-deposit beer bottles up 40% over the figure set for June a year ago and credits the gain to "tremendous acceptance" of the new shortie bottle.

Two new packaging materials make their advent, from important companies, in the form of household wrap: their packaging potentialities should be investigated. Scott Paper Co. markets its new "Wonder Wrap," which is a half-mil gauge of medium-density [Continued on page 44]

AVON

Dew
Kiss

Beauty
Aid for
Packaging...

Dew
Kiss



.....with **BRITE-PAK** **ENAMEL COAT**

Open this beautiful carton of Avon's *Dew Kiss* and what do you find? An interior so white and inviting that it enhances the feminine appeal of this new, delicate, pink moisturizing lotion from the famous line of Avon products.

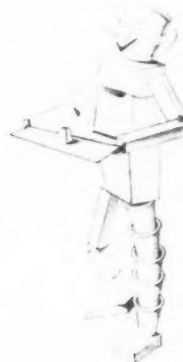
The Dew Kiss carton—handsomely produced by one of our customers—again demonstrates how Brite-Pak Enamel Coat bleached board increases sales appeal.

Brite-Pak Enamel Coat makes packages *sparkle* inside and out. Its gleaming surface is unexcelled for picturing products brilliantly, and for printing in full process color, yet it is economical.

See how you can *upgrade* your packaging. Write to Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N.Y.



**West Virginia
Pulp and Paper**



polyethylene described as having "a controlled degree of cling," avoiding the excessive stickiness of some other plastic food wraps. Dow Chemical at the same time introduces a transparent polyethylene "sandwich wrap" so low priced that it is designed to compete with waxed paper. Dow's "Handi-Wrap" will sell for 29 cents per 100-ft. roll, or less than one-fourth as much as Dow's own Saran Wrap at 33 cents for 25 feet.

Latest breakdown of beer production by *Brewers Almanac* shows that four-fifths is now packaged, providing, in 1959, a \$417-million market for bottles and cans. The brewing industry uses 9.3 billion cans per year, along with some 1.86 billion bottles (many of which serve for multiple trips). As of 1959, bottles were dropping slightly in share of market and cans gaining: a little more than 60% of all beer and ale in bottles as against 62% in 1958, and 39.9% in cans as against 38% in the previous year. Returnable bottles still held 53.9% of the market.

Frozen-foods trend to polyethylene-bagged, loose-frozen fruits and vegetables is growing fast, puts pressure on machinery makers for faster form-fill-seal machines. Packers accustomed to 150-200 a minute carton line aren't satisfied with 60-80 for bags, even though quantity of fill is greater (usually 24-30 oz.). One major packer successfully tested a 10-oz. polyethylene bag (same quantity as carton), at 35% saving in package cost, but won't pursue idea until faster machinery is available.

Good background on plastics for packaging is contained in the August issue of *Modern Plastics*: Lead article exploring in depth the latest developments in film laminates and an authoritative study on "When and How to Use Pressure Forming" as distinguished from vacuum forming.

Aluminum cans appear to be winning the frozen citrus-concentrate market—a potential of two billion cans a year. Packaging Materials Committee of the Florida Canners Assn. has recommended cans with aluminum bodies with the new, lightweight, 75-lb. tinplate ends as "the best type of 6-oz. container presently available for frozen orange-juice concentrate." Reason for tinplate ends: Packers fear that aluminum ends might give difficulty with certain types of can openers now in use. On the other hand, some brewers favor tinplate bodies with *aluminum* ends—because aluminum is easier to puncture with a beer-can opener. Convenience is the key—either way you look at it.

Watch the growth of frozen foods in the institutional field. Latest figures of the Dept. of Agriculture show that while the retail pack of frozen vegetables in the period 1949-59 increased from 364 million pounds per year to 888 million, the institutional pack has gained even more rapidly—from 200 million pounds to 738 million. The growth of frozen potatoes is described as "phenomenal"—from a mere 71 million pounds in 1953 to 371 million pounds in 1959. Potatoes currently account for more than 20% of all frozen vegetables.

Clever idea: Tennessee Stove Works, Chattanooga, regularly pictures the contents of each shipping carton on the outside of each shipping carton, in color. Now, each quarter of the year, it changes the color. Thus, it is easy to determine the inventory of products that have not moved. It is a quick, visual means of controlling stock.

New emphasis on marketing was a prime topic at recent meeting of the Grocery Mfrs. of America. Lee S. Bickmore, president, National Biscuit, traced the evolution of thinking since the turn of the century, when today's big food companies were being created, and called on lawyers to lead them. Next, the trend was to financial men; then to processing men—now the marketing man is taking over. Does this account for the increasing emphasis on the selling aspects of packaging?

[Continued from page 41]

4 COMMON PROBLEMS IN MAKING WAXED GLASSINE BAGS

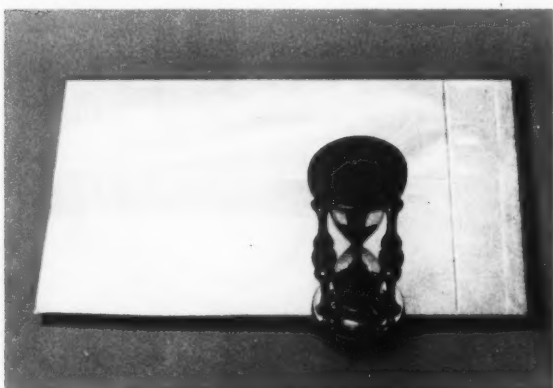
(and how the Arabol man helps you solve them)



1. THE BAG IS ODORIFEROUS—All right, it *smells*. An unpleasant situation, especially when the bag is used for packaging foods. If the adhesive is at fault, it's because the solvent is evaporating too slowly, leaving a residual odor. The solution? A fast-penetrating, quick-evaporating solvent system. The Arabol man will see that you get it.



2. THE ADHESIVE WON'T STICK—This may be due to an abnormally heavy coating of wax on the bag. Or a coating that has been modified for greater protection. The Arabol man may investigate: (1) How you're applying heat; (2) Ditto the adhesive; (3) Whether the wetting properties of the adhesive need improving; or (4) Whether you should switch to a suction type adhesive.



3. THE ADHESIVE IS SLOW DRYING—What happens when drying time is lengthened? Deliveries fall behind and customers become impatient. The problem can usually be traced to solvents or plasticizers that evaporate too slowly. Possibly, the use of a suction type adhesive is indicated. But why guess? The Arabol man is at your service. Call on him.



4. THE ADHESIVE "FILMS" TOO FAST—This can play havoc with your production. Lumps form on the roller, causing breaks in the paper roll. Or they may even be deposited on the glassine surface. Controlling bag quality becomes difficult and time and production losses mount. A *slow-filming* adhesive could pull you out. See the Arabol man.

THE BEST WAY to solve adhesive problems is to prevent them from happening. You can begin by telling us *all* the conditions your adhesive must meet—in your plant, in transit and after it reaches your customer. To help you understand these conditions more fully, we have prepared an interesting booklet that can save you no end of aggravation—and money. It's called "HOW TO BUY ADHESIVES—23 BASIC YARDSTICKS." Send for it today.



ARABOL ADHESIVES

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Printing is just *one* of many separated steps in label production. But not on a New Era Press! In a *single pass*, it prints in any number of colors; die cuts; slits; punches; perforates; numbers; cuts off, rewinds or folds. What's more, a New Era Press *handles any type of label stock* including heat-seal or pressure-sensitive. Delivers up to 7,500 impressions an hour! Learn more about the remarkable New Era Press! Write today on your letterhead for free Bulletin #211. New Era Mfg. Co., Box #400, Dept. MP-10, Hawthorne, N. J.

Packaging Notes

Molded polyethylene baby bib features a large catch-all pocket. Molded into bottom front, it traps falling food and keeps crumbs off floor. Bib washes along with dishes, is quick drying.



No-drip polyethylene pouring spout for milk bottles comes in sizes to fit quarts, halves, or gallons. Manufacturer claims it prevents spills and splashes, cleans quickly, lasts almost indefinitely. Available plain or imprinted with dairy name or logo.

New portable impulse sealer is useful for fabricating large items from polyethylene sheet, completely enclosing bulky items in polyethylene, or sealing polyethylene liners of large drums and bags. It consists of separate power pack and hand-operated sealing tongs; produces a seal 8" long, $\frac{1}{8}$ " wide. It can seal 2 pieces of up to 6 mils each.



Anti-static spray for polyethylene film works quickly and effectively on rolls, sheets, wherever static develops. Helps printers and converters of polyethylene packaging, bags, envelopes, etc. keep up high production rates—by chemically neutralizing static electricity generated by friction or atmospheric conditions. Comes in easy-to-use aerosol container.

Polyethylene packaging of brown and powdered sugar—recently introduced as "an industry first" by a California company—promises to minimize lumping and caking of these extremely moisture-sensitive products. Because polyethylene acts as a moisture barrier, it keeps the brown sugar moist, the powdered dry.

The 3-mil polyethylene bags used are 3-color flexographically printed. Size is $6\frac{1}{2}$ " x 13", suitable for inserting into a kitchen canister. And, once opened, the bag can be reclosed for continued freshness with a simple device offered by the company as a premium.

U.S.I. Doubles Polyethylene Capacity at Houston Plant

New Production Makes U.S.I. World's Second Largest Producer of Polyethylene Resins

A new section of U.S.I.'s polyethylene production plant at Houston, Texas, has just been started up. This new installation doubles the capacity of this plant, and establishes U.S.I. as the second largest producer of poly-



View of U.S.I.'s polyethylene plant in Houston, Texas. With plant in Tuscola, Illinois, Company now has total production capacity of 300 million pounds per year.

ethylene in the world. This latest expansion brings U.S.I.'s total production capacity of PETROTHENE polyethylene resins to 300 million pounds per year.

Rapid Growth Since 1955

U.S.I. has grown rapidly in the polyethylene field. Its first plant with a 25 million pound annual capacity was started up at Tuscola, Illinois, in early 1955. This plant was doubled in size in 1956 and redoubled in 1957 to a capacity of 100 million pounds. In early 1959 the Houston plant was placed on-stream, with a 75 million pound per year capacity (soon increased to 100 million), and this new expansion doubles that plant capacity.

U.S.I.'s PETROTHENE resins have taken a strong lead since their introduction, especially in the film and paper coating markets. According to Vincent McCarthy, U.S.I. Director of Plastics Sales, this market position was built upon a policy of tailoring resin properties for specific applications. Within the past four months, for example, the company has developed and introduced a new produce-bag resin, a new paper coating resin, three new blow-molding resins, a new cast film resin, and two high-flow blending resins.

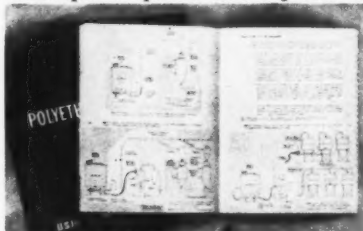
Production requirements for the new produce-bag resin are expected to make the largest single demand upon the new plant capacity. Introduced only this past April, demand for PETROTHENE 112 is already heavy, because of the unique combination of high-clarity and high-toughness it gives to produce bags and "general-purpose" film.

U.S.I. Announces New Booklet on Bulk Handling

"PETROTHENE" POLYETHYLENE... When to Use Bulk Handling," is a 24-page booklet prepared by U.S.I. to help resin users determine:

1. whether or not they should be buying in bulk.
2. which type of bulk packaging would best fit a particular plant's requirements.
3. which type of unloading system to choose.

Or, for processors whose plant is already equipped with a bulk materials-handling system, this booklet offers help with expansion plans and other problems.



Types of bulk conveyances used by U.S.I. to ship PETROTHENE resins are described. Graphs, tables, and calculation sheets show how net savings and payout time for capital invested in bulk handling equipment can be figured.

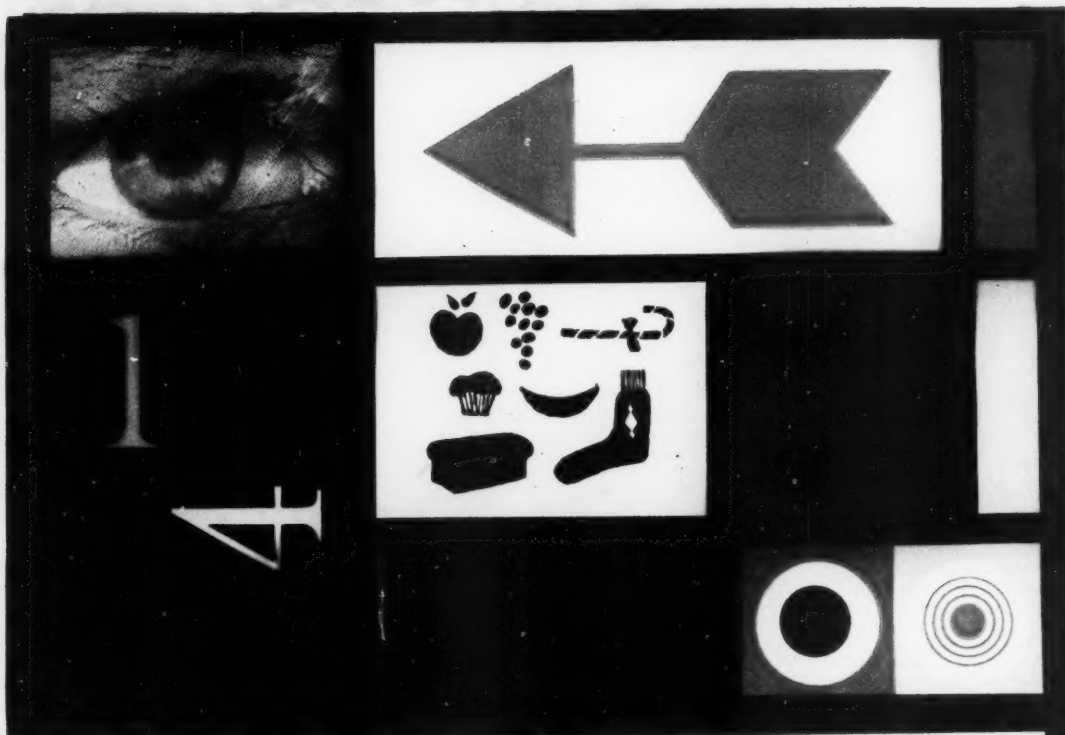
For copies, write to Technical Literature Dept., U.S. Industrial Chemicals Co., 99 Park Ave., New York 16, N.Y.

New Help for Blow Molders

U.S.I. has just released an 8-page Technical Data brochure entitled, "BLOW MOLDING... How to Obtain Highest Quality and Production Rate." It discusses mold cycle time and the more important properties of blow-molded items in detail; then, shows how each is affected by 8 variables.

This information is based on the results of an extensive research program currently being conducted by the U.S.I. Polymer Research Laboratories. Its aim is to find the resin properties and machine conditions which will result in the best product properties—at the most economical production rates. As the project continues, more reports will be issued.

For copies, write to Technical Literature Dept., U.S. Industrial Chemicals Co., 99 Park Ave., New York 16, N.Y.



Colorful Polyethylene

...offers powerful
sales advantages

Every color of the rainbow — from brilliant hues to subtle pastels can be printed on clear polyethylene film. Colorful designs, sales messages and product information on your packages produce attractive showcases that draw buyers to your products.

Polyethylene is economical. Polyethylene is the least expensive high clarity film you can buy. It can be printed economically at high speeds, with sharp registration and good ink adhesion. Add to this the soft, natural flexibility and durability of polyethylene and you have a versatile packaging material that offers you powerful sales advantages.

Colorful polyethylene packages are now being used for a host of applications, including produce, dairy, bakery, laundered shirt packaging, and soft goods overwrap. Packages can be formed on automatic machines... sealed by heat.

U.S.I. produces a number of PETROTHENE® resins ideally suited for producing packaging film of every type — clear or printed, thick or thin, tough or tearable, slippery or sticky. Extruders and converters make these films available in a wide range of thicknesses, with a combination of special properties to meet your every packaging need.

Discuss your packaging requirements with your film supplier. He'll be glad to recommend the type of polyethylene film best suited to your particular application.



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in every
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EXTRA INK COVERAGE • EXTRA SHARP
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DIVISION OF AMERICAN-MARIETTA COMPANY**

YOU HOLD ALL THE ACES WITH

STIXIE SHEETS

**NO EXPANSION
NO CONTRACTION
NO CURL**

MADE IN U. S. A.

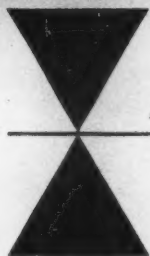
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pressure sensitive products

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Better Packaging
ALCOA ALUMINUM

Cans and Containers



Put Alcoa's aluminum packaging services to work for you. We create new designs, check costs, answer questions on anything from appearance to performance. We offer you full-scale research facilities... merchandising and marketing data... the most sales-minded approach in the industry. All mobilized to help you design it... apply it... sell it.

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Better Packaging

ALCOA ALUMINUM

Foil Packaging

Sales Come Alive

with new

Western-Waxide Five



Food needs robust packaging to sell on today's crowded shelves. Here are five new ways major food producers are using Western-Waxide packages to keep sales healthy and growing. For complete details on any or all of the packages shown, write: Warren Townsend, 2101 Williams Street, San Leandro, California.

FRITOS* CORN CHIPS POUCH: New method of pouch packaging replaces bags ... offers lower production costs.

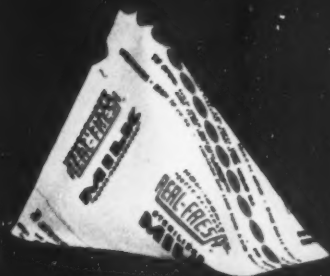
CHET'S BOILABLE POUCH: This gleaming aluminum pouch for prepared frozen foods needs no carton or overwrap. The crisp four-color printing resists boiling water.

H. J. HEINZ BABY CEREAL OVERWRAP: Six-color rotogravure printing makes this Western-Waxide wrapper sparkle with eye appeal—color coding identifies varieties. Machine overwrapped from roll stock.

HORMEL BACON PACKAGE: The semi-rigid five-color Mullinix Peek-A-Boo® package keeps displays neater and bacon fresher. The flap provides light protection, strong visual impact, and allows shoppers to inspect the contents.

REAL FRESH MILK, INC.: New low cost, paper/foil/polyethylene laminated Tetra Pak package protects whole sterile milk against contamination—without refrigeration.

*Fritos is a registered trademark of The Frito Company



CROWN ZELLERBACH

WESTERN-WAXIDE DIVISION

Plants and sales offices in principal cities throughout the United States
Headquarters, 2101 Williams Street, San Leandro, California
In Canada address product inquiries to Crown Zellerbach Ltd., Vancouver, B.C.



“Put it in plastic,” say 9 out of 10 customers!

The American Dairy and Kent Plastics of Evansville, Indiana wanted to know if people really noticed or cared about the type of package a product comes in. So they gave new, sample plastic containers full of cottage cheese to over a hundred consumers. These packages were vacuum-formed with DYLENE® polystyrene.

Follow-up interviews showed that 93% of the people preferred plastic to paper containers. They said that lightweight plastic containers were easy to stack, easy to open and reclose. They said the containers didn't soften, and left no odors or taste. They were impressed with the attractive pastel colors, and printing on the lid. Many people served from the container rather than transfer the contents to a dish. Others found the easy-to-wash,

reusable package ideal for left-overs and freezer dishes.

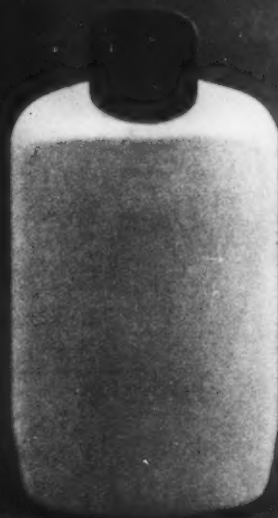
Economical, hi-impact DYLENE polystyrene has a hard, glossy finish; it won't chip or flake. Containers molded of DYLENE are suitable for automatic filling and capping equipment. DYLENE is dimensionally stable, comes in a wide range of eye-appealing colors. Consider DYLENE polystyrene for your next packaging application. Koppers also makes these other fine plastics for packaging: DYLAN® polyethylene, SUPER-DYLAN® high-density polyethylene, and DYLLITE® expandable polystyrene. For more information, write to Koppers Company, Inc., Plastics Division, Dept. MPG 100, Pittsburgh 19, Pa.

KOPPERS PLASTICS





Wirz knows what plastics can do...



and handsomely styled polyethylene bottles by Wirz can do it for you. Select from a wide variety of standard shapes and sizes in a complete range of container colors... or let Wirz create your exclusive container design. Result: your product packaged for orders where appeal is greater profit. Let a Wirz representative show you what creative packaging in plastic means by Wirz... it does for your product sales.



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needs a "strong bench". When you buy Duraglas containers or their closures from Owens-Illinois, you acquire the rights to a "strong bench" of technical and merchandising skill.

On call are specialists in designing packages and making them perform efficiently in your plant and where your products are sold.

Ask your Owens-Illinois salesman. Call him at your nearby O-I office or write Owens-Illinois, Toledo 1, Ohio.



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**National Bohemian returnable beer cases make
TWO TRIPS FOR ALMOST THE COST OF ONE
in REYNOLON® PVC laminated cases**

Here's a good example of quality packaging for a quality product—at a savings. National Brewing Company's returnable beer cases laminated with Reynolon PVC film provide almost a 50% reduction in cost per trip, or make two trips for about the cost of one. And Reynolon also offers another important advantage—it makes a better looking case that stays attractive throughout its service life.

Reynolon polyvinyl chloride film is adding sales appeal and quality protection to many food items and non-food products. It is crystal clear. It is shrinkable and provides a skin-tight package. It has high tensile strength, offers low temperature flexibility, has good shelf life. It is printable and sealable by heat or by adhesives. It can be metalized. And it can be easily laminated to paper, chipboard or other materials as demonstrated in National Bohemian laminated cases.

For details or technical assistance, contact the Reynolon Plastic Specialist at the Reynolds office in New York, Camden, Detroit, Chicago, St. Louis, or Los Angeles. Or write *Plastics Division, Reynolds Metals Company, P.O. Box 2346-RM, Richmond 18, Virginia.*



Cases laminated by Wilcox-Woolford Corporation, Spring City, Pa.

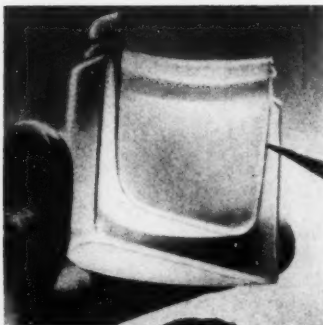


Watch Reynolds new TV show "Harrigan & Son", Fridays; also "All Star Golf", Saturdays—ABC-TV.

Equipment & Materials

Double-walled plastic jar

A double-walled polypropylene jar, designed for the packaging of cosmetic creams and similar-consistency products,



has been introduced by Imco Container. The supplier points out that the double-wall construction seals in a protective shield of air between the container's walls. Added eye appeal and reduction of the danger of breakage are other advantages cited for the new jar.

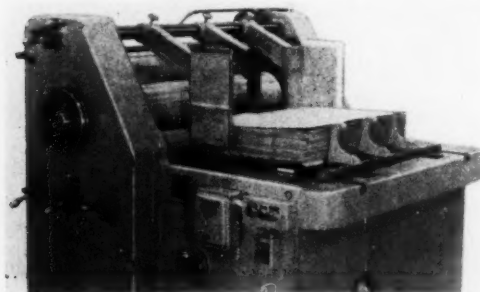
According to its manufacturer, the plastic container can be molded to match the dimensions and capacities of standard flint and opal glass jars, with a saving of 80% or more in weight. The jar is offered in a variety of colors, with or without hot-stamped decoration. Container sizes now available are 1, 2 and 4 oz. Additional details can be obtained from Imco Container Corp., sub. Rexall Drug & Chemical Co., 75th & Cleveland Sts., Kansas City 30, Mo.

Multiwall bag with polyethylene ply

New from Chase Bag is a multiwall shipping sack that features an intermediate ply of lightweight polyethylene film spot pasted at top and bottom to adjacent sheets of heavy-duty kraft paper. Because the polyethylene sheet is sandwiched between paper walls, it is protected from abrasion and other mechanical injury from the bag contents as well as from the outside. The moisture-resistant bag is marketed under the name Poly-Ply Multiwall. The supplier reports that bag construction offers superior moisture resistance and flexibility even at very low temperatures. Standard bag sizes offered by the company are 25, 50 and 100 lbs. Closures can be sewn open-mouth or sewn-valve types. Chase Bag Co., 155 E. 44 St., New York 17.

Flexographic shipping-carton printer

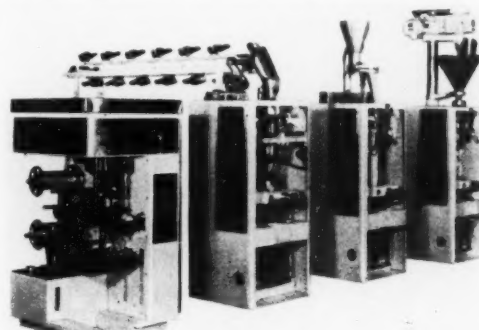
A flexographic printer that prints knocked-down corrugated containers after the manufacturer's joint has been sealed is offered by Bostitch. The KDF model, about half as wide as a printer-slotter, uses quick-drying ink, thereby making it possible to handle the boxes immediately after printing, the supplier reports. The machine is designed to be fed



directly from any type of container-finishing equipment. It can be supplied with a counter-ejector attachment which counts and stacks the knocked-down containers as they come off the press, automatically moving the completed stack ahead and starting a new one. The standard model of the machine prints in one color all panels on the top side of a knocked-down container. Features of the unit include automatic hopper feed, variable-speed drive and register adjustment. For more information, contact Bostitch, Inc., Container Machinery Div., East Greenwich, R.I.

'Tubeless' forming of film packages

A line of automatic film-packaging equipment, among whose features is "tubeless" forming of the film package, is now available from General Packaging Equipment. According to the supplier, the machines use a unique forming assembly which requires no tube to support the packaging material as it is formed into pouches. Advantages reported for this feature are that the product drops directly from hopper or scale into the tube, eliminating the tendency of many products to bridge in the tube and also eliminating build-up of dust or product residue which might accumulate in the



tube. The assembly, says the supplier, is particularly effective in the packaging of such lightweight items as potato chips. The tubeless assembly reportedly simplifies loading and set-up of the packaging material. Within one minute, says the supplier, the material can be loaded and ready to run. The film package's back-seam seal is effected by pulling the overlapped film between a stainless-steel bar and a heated platen. Shown above are four machines which employ the "tubeless former" principle. They are (l-r): the Model PC, designed for packaging a wide range of free-flowing, lightweight products at reported speeds up to 60 packages per minute; the Model P, for packaging such products as frozen foods in polyethylene film; a volumetric packager, and an auger-feed unit. Additional details on these machines and on the tubeless former are offered by General Packaging Equipment Co., Houston 24, Tex.

Strong cast-polyethylene film

A cast-polyethylene film designed for the packaging of loose-frozen vegetables and fruits (such as kernel corn, beans, peas and strawberries) is now available from Kordite. The film, Kordite 300-F, is claimed to possess outstanding cold-storage strength which virtually eliminates package tearing caused by low-temperature brittleness. Its WVTR rate is reported to be sufficiently low to insure complete protection of food products. The company says that the new cast film permits larger unit packages at one-

GAYLORD SETS THE STAGE FOR SMOOTH AUTOMATIC PACKAGING

Plan a happy ending for your automatic packaging.
Buy containers that fit your machinery precisely,
flow through your lines without a stumble or a fluff.

Gaylord produces such containers, with
letter-perfect precision, in any number you need.
Get the whole story from your Gaylord Man.
He'll turn in an award-winning performance.



CROWN ZELLERBACH CORPORATION
GAYLORD CONTAINER DIVISION



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HEADQUARTERS, ST. LOUIS
PLANTS COAST TO COAST

Equipment & Materials [Continued]

third the cost per ounce of carton packaging. Other features cited for the film are: superior heat-sealing qualities, excellent machinability due to reduced variation in gauge, high-quality printability and superior clarity and gloss. The film will be marketed at the same price as conventional polyethylene, says the firm. *The Kordite Co., Macedon, N.Y.*

Thin-gauge tinplate cuts weight 50%

"Ferrolite," a tinplate which is about half the thickness of tinplate now used in can manufacture, is available in commercial quantities from United States Steel. Because of its thinner gauge, the material is said to offset the weight advantages of aluminum. The tinplate is produced by a special process which is being patented by the supplier. According to the company, the material combines the qualities of proportionally greater strength and lighter weight with lower cost. Its weight is in a range of 40 to 60 lbs. per base box (217.78 sq. ft.), compared with a 75- to 100-lb. base-box weight range for conventional tinplate, the supplier says. In packaging tests, the material reportedly has proved successful in the canning of frozen concentrates and motor oil. The tinplate also can be used to manufacture detergent and paint cans, disposable baking pans and other containers, the company notes. *United States Steel Corp., 525 William Penn Pl., Pittsburgh 39.*

Blow-molded polyethylene bottles

Celanese reports the introduction of a new line of blow-molded linear-polyethylene bottles. The



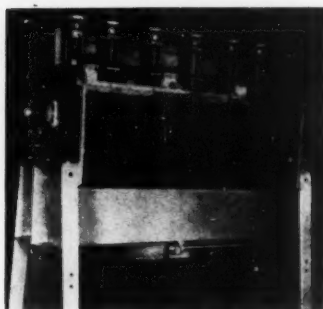
containers are designed for the packaging of a wide range of liquid products, says the company. Known as the Royal Designer line, the cylindrical plastic containers are available in three sizes: 12, 22 and 32 oz. The bottles can be decorated with offset or silk-screen printing or they can accept paper labels. Circumferential rings molded into bottle walls are designed to prevent labels from slipping. All three bottle sizes have screw-threaded necks and pour spouts with "no-drip" lips. High strength and light weight also are attributes which are cited for the linear-polyethylene containers by the supplier. *Celanese Corp. of America, 180 Madison Ave., New York 16.*

Multicolor printing on corrugated

Mead Containers reports that its new Corr-Lure process achieves substantial economies in multicolor printing on corrugated board. The system applies as many as 12 colors, which can be blended during printing. According to the company, plate cost is the same as for a set of two-color plates and printing cost is only slightly higher than for a two-color run. Savings in printing plates and press time are significant, says the supplier. The company points out that companies now using one- or two-color shipping cartons therefore can attain the benefits of multicolor printing with only a moderate upcharge. The new system also is said to make color coding more feasible, since trademark and other family features can be retained in their customary colors, with other colors added for coding. Additional details are available from *The Mead Corp., Mead Containers Div., Dayton 2, O.*

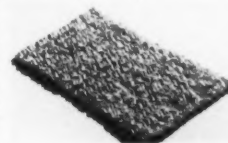
Sheet-material creping machine

A sheet-material creping machine which operates automatically without adhesives, doctors or rubber conveyor belt has been developed by Bird Engineering. The new unit



provides both machine - direction and cross - direction compaction individually or simultaneously. This action, the supplier reports, imparts "two-way-stretch" characteristics to such creped packaging material as kraft, thermoplastics, laminated polyethylene sheets,

silicone-coated papers and aluminum foil (alone or in combination with other flexible material). The machine (shown above) is said to be adjustable to produce in excess of 500% crepe in machine direction and up to 50% crepe in the transverse or cross-machine direction. Shown at the right is an illustration of creped kraft with 300% machine-direction stretch and 25% cross-machine stretch. In operation, the web is formed in machine-direction corrugations to produce the necessary web rigidity for subsequent compaction. Once in this form, the web is gripped firmly to control its extrusion against a movable surface, whose location, character and relative speed determine the characteristics of the crepe. The new creping machine can be incorporated into a user's own finishing operations, eliminating the need to inventory bulky rolls of finished material, says the supplier company. Additional details on machine and material are available by contacting *Bird Engineering, South Walpole, Mass.*




Self-closing, capless dispenser tube

Extruded from low-density polyethylene, a self-closing capless, squeeze-to-use dispenser tube has been introduced by Webcon. The container is suggested for use in the packaging of such viscous products as cheese, meat spreads, jelly, shampoo, suntan creams, toothpaste and many other food and cosmetic items. In patented tube construction, the conventional screw cap is replaced by a tempered-steel closing clip, which is forced open by the contents as they are dispensed in a flat ribbon. When pressure on the package is released, the clip closes tightly. When closed, the mouth of the tube is clean and air is prevented from entering, the supplier says. Available in a choice of color designs, the tube is extruded from Eastman Chemical's Tenite polyethylene. For details, write *Webcon, Div. Weber Aircraft Corp., Burbank, Calif.*

12-bottle carry-home carton

Bertram Wire Products introduces a cellular 12-bottle carry-home pack for beverages. The carrier is made of double-faced corrugated board and is reportedly strong enough to support 16 lbs. of bottle weight. To facilitate carrying, the container is equipped with a flexible steel carry handle. The carton portion, which can be shipped flat for economy, is not supplied by the developer, which offers only the handle. However, says the company, the carrier can be produced from Bertram Wire Products' plans by any box manufacturer. The metal handle slips into place after carrier set-up, locking underneath special corrugated tabs in the sides of the carrier portion. According to the developer, advantages of the BWT Twelve-Pak include: increased sales of bottled beverages; increased space on the package for [Continued on page 174]



Strip-O-Matic

by

MERCURY

for

Unit Packaging

A—STRIP-O-MATIC featuring automatic pill, tablet and capsule counter and feeder. Double out machine with registration on two sides, as illustrated with perforating, easy tear and strip counting devices.

B—STRIP-O-MATIC with Mateer Augur filler for feeding exact quantities of liquids, semi-liquids and variable density powders.

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MERCURY



HEAT SEALING EQUIPMENT CO.

2601 N. HOWARD STREET • PHILA. 33, PA.

new treatment gives super high gloss to packages coated with A-C Polyethylene

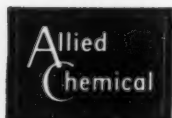


A new heat treatment using A-C® Polyethylene developed by Semet-Solvay imparts *super* high gloss to waxed paperboard . . . lets you dispense with overwrapping in many cases. It's ideal for frozen food and ice cream packages . . . butter and oleo . . . bread wrappers.

You can use this new technique while realiz-

ing all the advantages of A-C Polyethylene wax coatings: greater resistance to grease, moisture, scuffing and abrasion . . . smooth plastic-like feel . . . positive lock at freezing temperatures . . . brighter printing effects.

For details on *super* high gloss with A-C Polyethylene, write us at the address below.



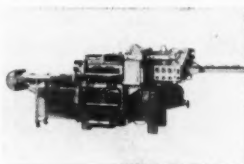
SEMET-SOLVAY PETROCHEMICAL DIVISION

Dept. 579-L, 40 Rector Street, New York 6, N. Y.

National Distribution • Warehousing in Principal Cities

IF ANY OPERATION IN YOUR PLANT CALLS FOR HIGH-SPEED, AUTOMATIC OVERWRAPPING ... BATTLE CREEK MACHINES CAN PROBABLY DO IT BETTER, FASTER, MORE ECONOMICALLY THAN ANY

OTHER



Periodic re-orders of the Model 43 by satisfied customers mirror its unique versatility, efficiency and reliability. Products are not just wrapped ... they are transformed into individual merchandise "show-cases". At speeds of 45 to 75 per minute, the Model 43 overwraps in printed or unprinted cellophane such diverse items as loose cookies, small baked goods, iced cakes, pre-packaged meats, textile articles, envelopes and clothespins. Utilizes either an underneath or end fold, and the product size range is 3" to 10" lengths, 1½" to 4½" widths and ½" to 4" heights. Write for details today

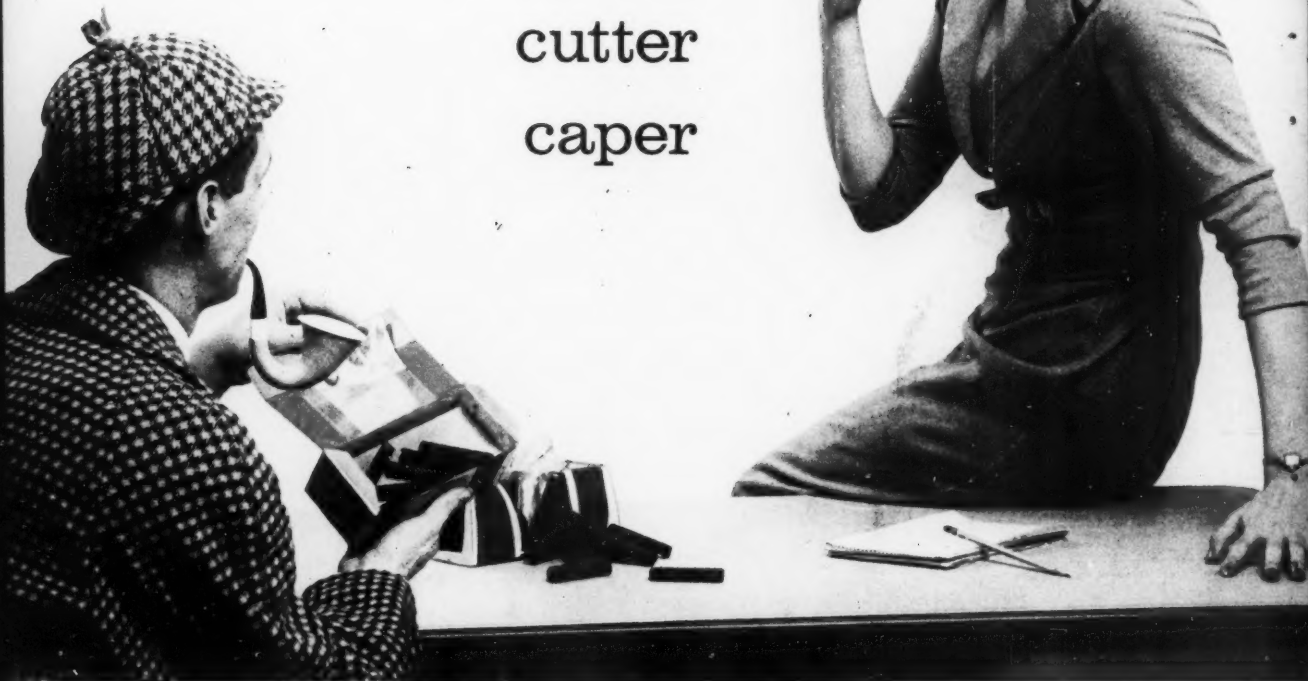


Continuous Flow® PACKAGING

BATTLE CREEK packaging machines, Inc., BATTLE CREEK, MICH.



The case of the cookie cutter caper



FEARLESS FULLER: I spent the whole morning looking through windows, Miss Watson.

MISS WATSON: Fearless! Don't tell me you've turned into a Peeping Tom!

FEARLESS FULLER: Please, Miss Watson. These windows happened to be on packages of Cookie Cutter cookies.

MISS WATSON: What were you doing looking through the windows? Counting the knuckles on the lady-fingers?

FEARLESS FULLER: No. It seems the adhesive used to seal the transparent window on the front of the Cookie Cutter cookie box wasn't Fuller's, and it gave way in some of the grocery stores.

MISS WATSON: How awful.

FEARLESS FULLER: Yes, all the cookies fell out of the packages and onto the floors of the supermarkets.

MISS WATSON: Well, as they say on Madison Avenue, "That's the way the cookie crumbles!"

FEARLESS FULLER: Come now, Miss Watson. Aren't you going to ask me how I solved the problem?

MISS WATSON: Of course, Fearless. How did you solve the Case of the Cookie Cutter Caper?

FEARLESS FULLER: I recommended switching to Fuller's Adhesive #1513. It forms a tight, firm bond between cellophane and chip board and won't pop loose under varying conditions. It lays smooth, won't wrinkle, ripple, or stain the package, and machines excellently at high speeds.

MISS WATSON: Oh, Fearless. You're the answer to a packaging engineer's prayer.

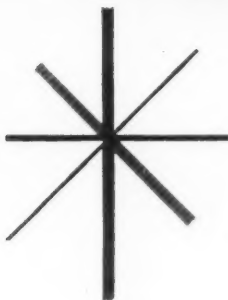
FEARLESS FULLER: Elementary, Miss Watson. A Fuller man always knows the solution to adhesive problems.

Your Fuller man is ready with the correct solutions on any adhesive problems for you, too. Contact your near by plant.

H. B. Fuller Co.
INDUSTRIAL ADHESIVES
St. Paul, Minnesota

St. Paul, Minn. • Atlanta, Ga. • Buffalo, N.Y. • Chicago, Ill. • Cincinnati, Ohio
Dallas, Tex. • Kansas City, Mo. • Linden, N.J. • Los Angeles, Calif. • Memphis,
Tenn. • Portland, Ore. • So. San Francisco, Calif. • Tampa, Fla.
Also Winnipeg, Can. • Fuller Adhesives International, Nassau, Bahamas

Make your products stand out from the crowd with



Send us your labels for redesign, without charge or obligation; or ask for our estimate on printing your present labels. Telephone, wire or write to any representative below or to A. M. Steigerwald Co., 910 W. Van Buren, Chicago 7. Telephone TAYlor 9-5400.

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KE 2-0114

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Juniper 7-1257

CLEVELAND 21, O.
A. C. Foster
4040 Mayfield Rd.
EVERgreen 2-7555

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P.O. Box 62—Rt. No. 1
Garden 5-5850

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630 Cedar St.
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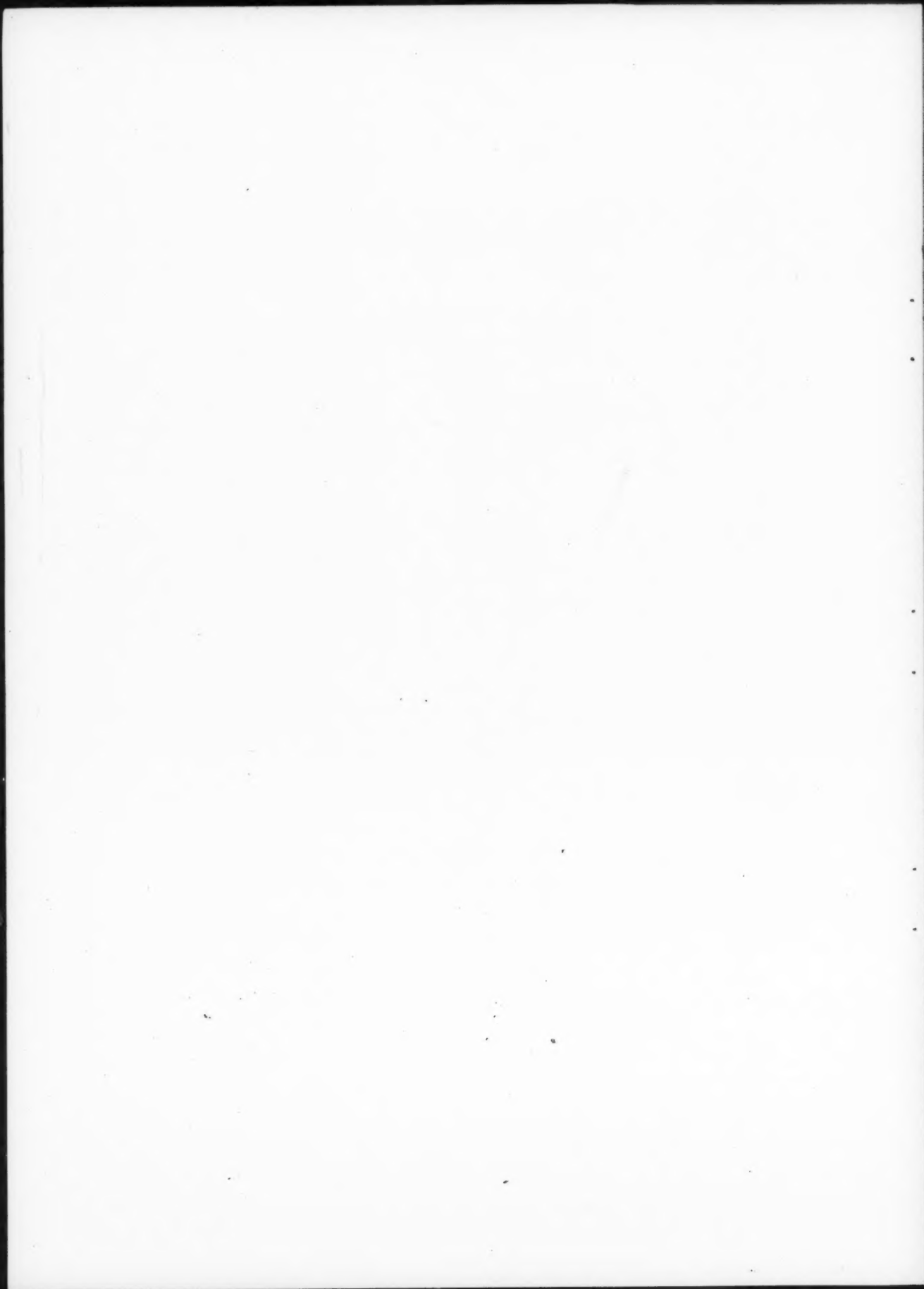
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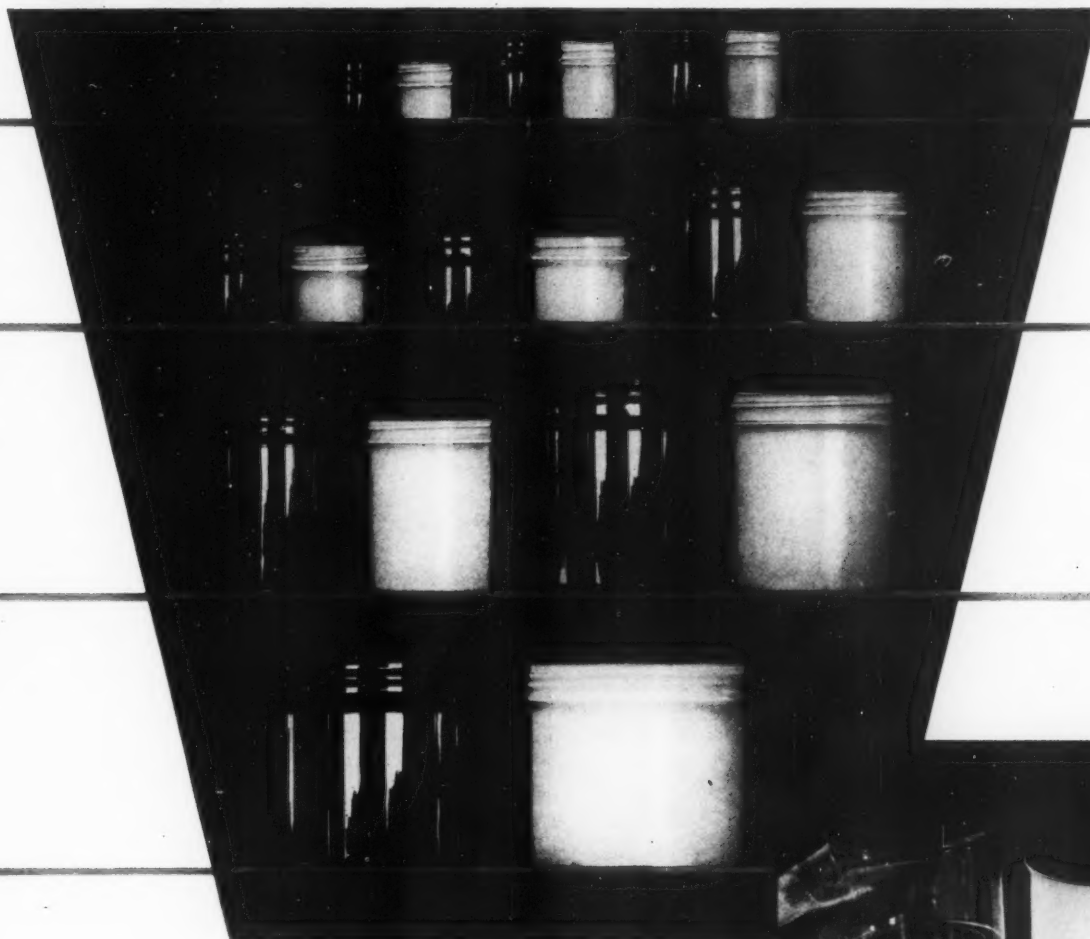
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**GOLD OR SILVER EMBOSSED • DIE-CUT OR SQUARE • FOIL SEALS AND TAGS • FLAT OR CONTINUOUS ROLLS
FOR HAND OR AUTOMATIC USE • HEAT SEAL • PRESSURE SENSITIVE • SPECIAL ADHESIVES**



SQUAT JARS



A Complete Line Competitively Priced

Whether you are selling soothing salves or fine powders, solder flux or cosmetic cream, the Clearsite squat jar is your answer to better packaging and lower shipping costs. Available from stock in nine sizes in clear polystyrene or linear polyethylene. Can also be molded in a wide range of colors to meet special requirements. Any design can be beautifully reproduced in our large and experienced multi-color printing plant. Standard closures available for all sizes.

Here's an attractive line of competitively priced jars that weigh about one-fifth the weight of glass jars of equivalent capacity. You benefit **three ways: better packaging, less breakage, lower shipping costs.** Write for samples and prices—Address Dept. 549.



THE NEW 32 OUNCE PLASTIC JAR

This big beautiful 32 ounce jar has all kinds of packaging possibilities in linear polyethylene with overflow capacity of 32.3 fluid ounces—weight 211 pounds per thousand; or clear polystyrene with overflow capacity of 33.8 fluid ounces—weight 212 pounds per thousand. Either jar takes a standard 120 mm closure.

CELLUPLASTIC

C O R P O R A T I O N
24 Commerce St., Newark, N. J.



Film for bread wrappers extruded from Tenite Polyethylene
by Fabricon Products, 1721 W. Pleasant Ave., River Rouge 18, Michigan

Film of **TENITE POLYETHYLENE**
gives bread the look, the feel,
and the seal that mean
greater sales and fewer returns

Fabrics Products, division of Eagle-Picher Company,
uses medium-density Tenite Polyethylene to produce
a tough, high-gloss, transparent bread wrapper

Film extruded from medium-density Tenite Polyethylene is an ideal material for bread wrappers. Its use benefits both bakers and housewives.

Because it is so sparkling clear and so soft to the touch, consumers can see the goodness and feel the freshness of bread wrapped in a protecting film of Tenite Polyethylene. "Protecting" is a good description of the role played by this modern packaging material. Its high moisture-vapor transmission resistance acts to prolong freshness, while its toughness means a long-lasting wrapper that will not easily be torn or punctured. This toughness, by the way, is retained even at freezer temperatures. Finally, its good heat-sealability contributes much towards an air- and moisture-tight closure.

To bakers, film of Tenite Polyethylene brings the double economy of lower wrapping costs and fewer returns of "stales." On the wrapping line, bakers find film of Tenite Polyethylene has the proper stiffness and slip needed for efficient use on high-speed packaging machines. At the

heat-sealing end, closures are simplified by the material's broad heat tolerance.

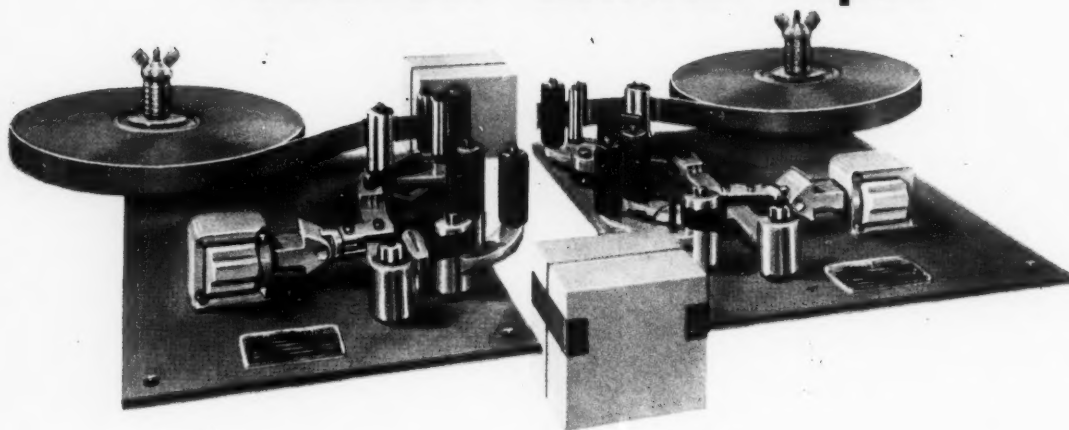
Like other leading suppliers of bread wrappers, Fabrics Products has chosen Tenite Polyethylene as its standard of quality, and vigilantly controls the extruding of "FAB-WRAP" film to develop the full measure of sparkle and clarity offered by this Eastman plastic.

For more information about this film... for guidance in adapting existing wrapping equipment and developing suitable wrapping techniques... write Fabrics, or EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSFORD, TENNESSEE.

TENITE®
POLYETHYLENE
an Eastman plastic

COMBINE

up to 75 units a minute with "SCOTCH" BRAND Tapes



You can form eight combination deals with the "SCOTCH" BRAND S-69 Combination Bundler in the few seconds it takes you to read this sentence. That's 3M-Matic Taping in action!

Quickly and securely, short clips of tape bundle two or more units together to form combination offers, or attach premiums to products. Mounted on conveyor lines, "SCOTCH" BRAND Combination Bundlers can be adapted to handle a variety of package shapes and sizes. Tapes are clean running, stick tightly, and are supplied in a variety of vivid colors. Can be printed with special sales messages too.

Discover how you can save time and money with "SCOTCH" BRAND Tapes and 3M-Matic Taping methods. Tape is also economical and fast for hand bundling operations.

What's your bundling problem? Boxes . . . bottles . . . cans . . . tubes? Chances are your 3M Representative can solve it for you. Ask your local "SCOTCH" BRAND Tape Distributor for more information or write: 3M Co., 900 Bush Avenue, St. Paul 6, Minn.

When tape costs so little, why take less than "SCOTCH" BRAND?

REG. U.S. PAT. OFF.
SCOTCH BRAND
Tapes for Packaging

MINNESOTA MINING AND MANUFACTURING COMPANY

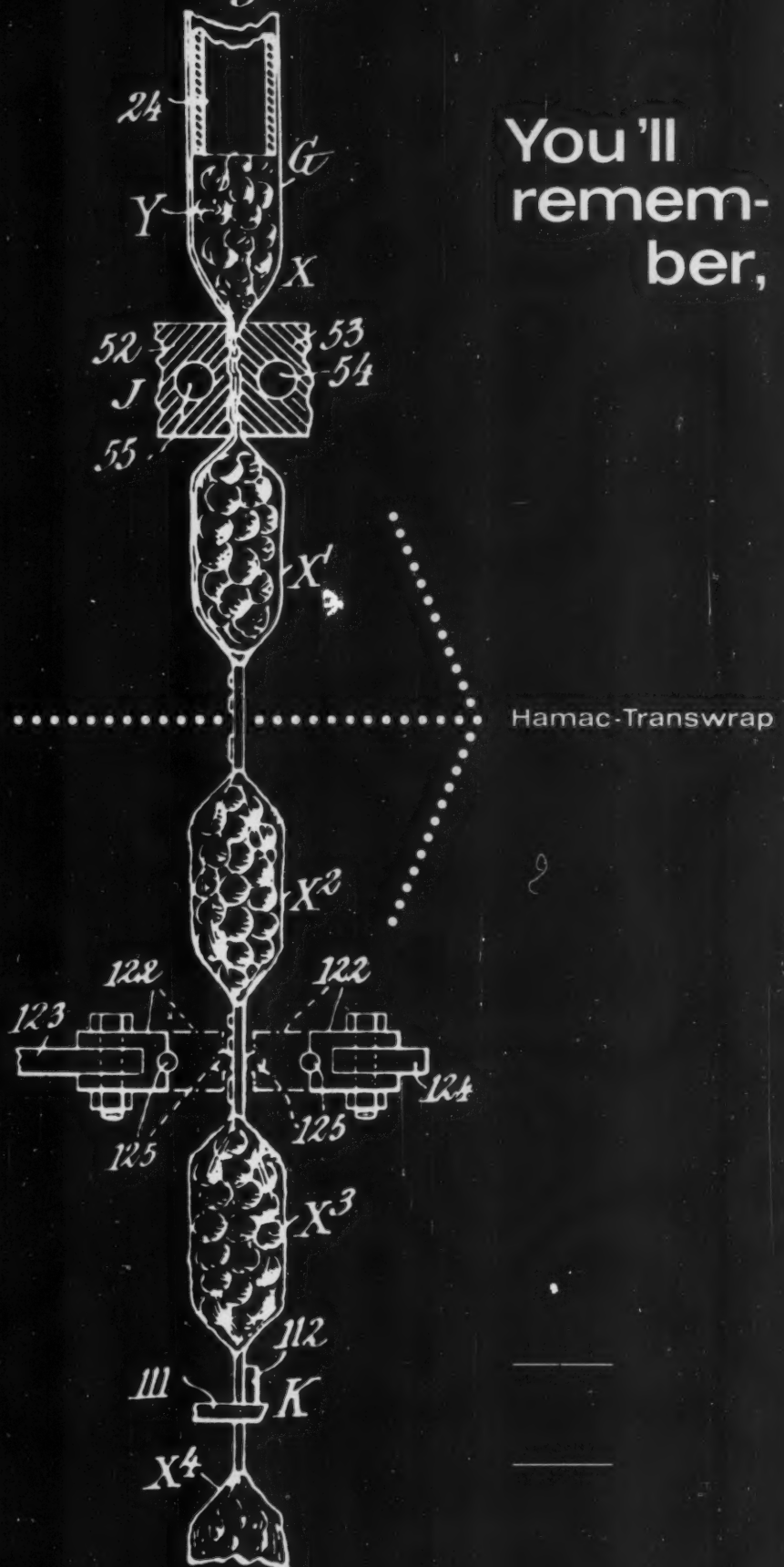
. . . WHERE RESEARCH IS THE KEY TO TOMORROW



"SCOTCH" IS A REGISTERED TRADEMARK OF 3M CO., ST. PAUL 6, MINN. EXPORT: 90 PARK AVENUE, NEW YORK 26, CANADA: LONDON, ONTARIO.



Fig. 20.



You'll
remember,



if we have
a specialty...



...it's volume
production

It's true that H & D has a reputation for solving thorny packaging problems with imaginative box design. But our real forte is *volume production of regular slotted corrugated boxes*—the kind you probably use to ship your product. In fact, H & D's annual output includes about 225,000,000 of these economical containers. Can you make use of this *specialty* for *volume*?

Hinde & Dauch Division



**West Virginia
Pulp and Paper**

HINDE & DAUCH DIVISION, WEST VIRGINIA PULP AND PAPER, SANDUSKY, OHIO • 17 PLANTS • 42 SALES OFFICES

Sounding Board

WE ASK THE READERS

Who in your company is the final package decision-maker?



Alan H. Cummings
President
College Inn Food Products Corp.
Chicago

The package decision-maker is not one person. The decision results from evaluating images, attitudes and facts from "brainstorming" executive sessions. These executives include representation from all phases of business—sales, marketing, production, accounting.

Management must "have a feel" as to the sales attitudes of consumers and the chain-store buyer. Exploration of these facts with a well-conceived plan will bring about the desired result.

We have just lived through this arduous, but very exciting experience. Our advertising agency, Cunningham & Walsh of Chicago, was advised of our desire for a completely new label design. Many meetings took place, resulting in label layouts in rough form being presented to us. During the creation of these designs from the agency, we—in the interim—had contacted our various container suppliers to have them submit their ideas from their creative department.

When this was accomplished, we brought together the layouts of both of our container suppliers and the agency, took the components of each proposal and blended them together, which then gave us the basis to begin the refining process of elimination, showing us the net result of a new distinctive image, yet maintaining carry-over concept of the quality image, with a progressive new look. We now have our complete transformation from the old to the new.

The process of making the final package decision is likened to osmosis. It is a growth pattern from within, encompassing the considered judgment of the many executives who, in the final analysis, must be convinced that, based on their decisions with respect to the package, they hold the ultimate responsibility of selling, merchandising and marketing the package.

Now back to the question: Who is the final package decision-maker? There is no one decision-maker. I believe the ultimate authority is a combination of the many facets that brought about the original motivation to make a change. The only time an individual should exert the authority of making the ultimate decision on a package is when there is procrastination and a general lack of comprehension of the objective sought.

We firmly believe that manufacturers on a small advertising budget can do well to invest in package design if they cannot invest in a high frequency of advertising exposures and other media.

Clinton Shepperd, *Administrative Assistant to the President, The Nestlé Co., White Plains, N. Y.*: The first step in any package design program at Nestlé, whether revision of an existing pack or an entirely new project, is to determine the specific objectives we wish the design to achieve. All our designs are marketing oriented and the design goals are set by the marketing executives assigned to the product.

In this way those responsible for the creative work on the package have, right from the start, complete information on the product, including its key selling points and the over-all advertising and merchandising strategy which will be used. We thus insure that design development will result in a package which is compatible with our over-all promotional program. Any package which fails on this score is rejected, no matter how pleasing esthetically or efficient in display.

As the early directional sketches are successively refined to final form, we require the comments and approval of not only our marketing group, but also our legal and technical staff and, ultimately, top management. By careful review at each stage, we make certain that every Nestlé package, in addition to being a good salesman, will comply with Government regulations, function properly to safeguard its contents and be consistent with basic corporate policy.

J. P. Floyd, *Director of Advertising and Promotion, Alcon Laboratories, Inc., Fort Worth*: Decision-making in packaging has traditionally been a problem to Alcon, as I assume it has been with most firms in the pharmaceutical business, where packaging has tended to become a function all its own.

Currently, the Advertising and Promotion Department serves as a point of coordination for all packaging materials. All suggestions for packaging changes are routed to this department for screening and for discussion with the other departments which would be most affected. If the change seems to have merit, it is formalized into a proposal and routed to each of eight department heads for approval.

Under our procedure, where approval is necessary from each department on any packaging change, there are still specific responsibilities to be carried

Sounding Board [Continued]

out. For example: the Laboratory Department is responsible solely for accuracy of labeling information; the Comptroller's Department carries the basic responsibility for approval of costs and appraisal of secondary impact of costs; the Production Department carries the responsibility mainly for mechanical specifications. The final responsibility for all necessary coordination rests with the Advertising and Promotion Department, which also has specific responsibility for non-required copy, design, color and over-all appearance. This sounds cumbersome and in a sense offers every department a veto, but so far, it works. And it has two outstanding attributes: that of keeping errors at a minimum and that of avoiding costly mistakes which have a tendency to occur with a more autonomous form of package decision-making.

W. E. Johnson, Packaging Engineer, Wm. S. Merrell Co., Cincinnati: The final package decision-maker in our company can best be said to be the sales manager. This is because, in the last analysis, the only successful package is one that sells.

The exact way a change in packaging comes about is something like this: Usually a new packaging idea is brought to the packaging engineer, who is also the chairman of the packaging committee. The packaging engineer then sounds out the various interested parties, including the members of the committee, because we believe all of the departments involved should agree on its desirability. Based upon his findings, the packaging engineer either presents the proposal to the committee or not. If a proposal is accepted by the committee, it then goes to the sales manager for his approval. After a proposal is approved by him, the packaging engineer writes up specifications for purchasing and the change is implemented.

For instance, recently the idea was brought to the packaging engineer's attention that plastic caps were being used on products which could be capped by less expensive metal caps. He then made some tests to see which products were stable enough for metal caps. The products which qualified were discussed by the various interested parties. The committee—and later the sales manager—approved the change and the improvement was made successfully.

D. N. Carvalho, Sales Manager, Glue Div., Darling & Co., Chicago: At Darling & Co., there is no one person who is responsible for the packaging decisions. The basic reason for this is that our products are used by many types of diversified industries, each one of which has its own specific requirements.

Packaging of our products varies from the use of 1-gal. pails to tank cars for our liquid products and from 1-lb. boxes to bulk carloads for our dry materials. Each of the divisions uses a combination of packages depending upon the customer, the product, the production problems and the costs.

Either the sales, production or purchasing functions may institute a change in packaging. A recent revision

was made by the glue division as a result of a customer request. In this case the sales, production and purchasing heads jointly acted to solve the problem. Differences were ironed out, tests were made and a final agreement reached by all departments. No one department or person made the final decision.

In another case, the sales manager of the mineral-feeds division made the final decision on an item sold through farm dealers. His decision was, of course, influenced by production and purchasing, but the primary influence was the effect on sales which a packaging change would make.

In short, our packaging decisions are made through the joint efforts of all departments and on the basis of customer needs, production problems and costs.



Dr. Jack Bloom

*Director of Research and Development
Continental Coffee Co.
Chicago*

The final decision on packaging depends upon whether or not the package is completely new or simply a revision or modification of an existing one.

In the case of a new product, Continental has a new-product committee composed of the marketing executive, the research director, the market-research director, product manager and the merchandising executive. A new package idea is submitted to this committee, with one member of the group accumulating all data required to evaluate the package design. The person selected from the five-man committee presents his findings at a meeting, where a decision is made. In the event no agreement is reached, the final word is voiced by the merchandising executive.

In the case of revisions on existing product packages, the procedure differs. The proposed change is presented to the product manager, who has the authority to reject it at will. If he approves the change, the new design is presented to the merchandising executive with his specific recommendations. Contact is established with both manufacturing and research departments to make sure there are no fundamental problems in executing the design. The design must then be finally approved by the merchandising executive.

John Gearhart, Vice President, Frank Tea & Spice Co., Inc., Cincinnati: This company has always felt that collectively made decisions are the best decisions. Therefore, packaging decisions are made by a committee. In most cases the decisions are made in such a way that everyone on the committee is satisfied. In recent years the group has expanded to eight members. This includes executives from all interested departments such as sales, production and advertising.

For the last two or three years we have employed a design agency to originate that type of packaging change. The way a packaging change comes about presently is something like this: The agency originates a new idea and submits it to the packaging committee. The committee then con- [Continued on page 224]

puts "craftsmanship"

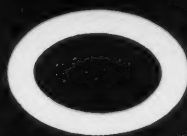
in

packaging!

The brilliance, beauty and quality that distinguish a fine piece of jewelry are the same ingredients that make up a successful package.

That's why Oneida's craftsmen — our staff of top package design people — strive for the sparkle that reflects in the woman shopper's eyes. If you've a hand to put your product in the spotlight, we can help you put it in the *right package*.

Four modern plants and the very latest 6-color flexographic, rotogravure and letterpress equipment live at your service. Write for details — of course, there is no obligation.



neida

whatever
your product . . .



flexible packaging
by **Oneida**



will surround it

with **SELL!**



Announcing the new 1961 Modern Packaging Encyclopedia Issue

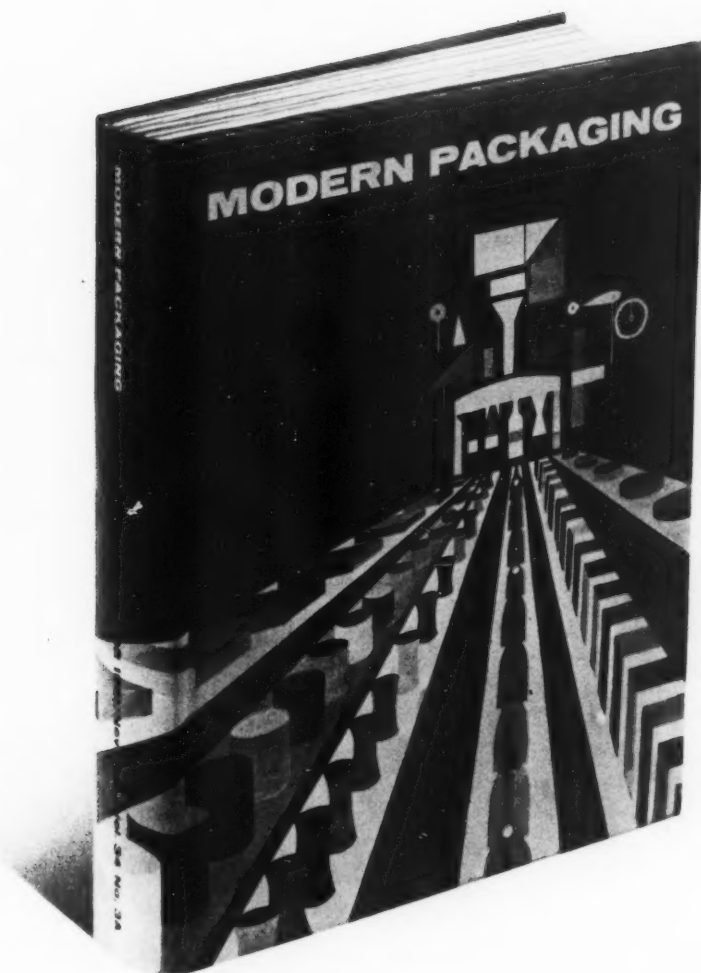
The One and Only Complete Reference

• Off the press starting late November . . . the 1961 MODERN PACKAGING ENCYCLOPEDIA ISSUE . . . the workbook of the packaging field since 1929. Often referred to as the "Bible" of the packaging field . . . the new 1961 issue encompasses articles on every subject of interest to every member of the packaging community. Updated in every respect, its variety is typified by new articles such as . . .

. . . A survey of 86 Packaging Using Companies which details their organization, trend of packaging thinking, growth pattern, allocation of packaging costs and major objectives.

. . . A Basic Guide to Filling machines for Dry products, Liquids, Viscous Products. 20 pages of charts detailing which company produces what machine, its applications and specifications.

. . . An article on The Effective Management of New Packages prepared by a nationally recognized management engineering firm.



Book for the Packaging Community

Editorial Departmental listings for the 1961 Issue include:

- | | |
|---|--|
| 11 pages on Trends and Developments | 16 pages on Aerosols, Valves and Propellants |
| 27 pages on Developing the Package | 64 pages on Machinery of Packaging |
| 19 pages on Paper, Paperboard & Coating | 10 pages on Accessory and Specialty Equipment |
| 29 pages on Films, Foils and Laminations | 15 pages on Package Making Equipment |
| 15 pages on Adhesives and Tapes | 25 pages on Designing, Printing and Decorative Packages |
| 16 pages on Paperboard Packages | 10 pages on Labels, Seals, Tags and Display |
| 10 pages on Flexible Packages | 22½ pages on Protective Packaging |
| 30 pages on Plastic Packages (molded and sheet) | plus 354 pages of informative, idea developing advertising for a grand total of over 880 pages of packaging information. |
| 13 pages on Metal Packages | |
| 22 pages on Glass Packages, closures and caps | |

For further details on how to receive the 1961 MODERN PACKAGING ENCYCLOPEDIA Issue refer to page 206A and 206B or write Subscription Manager.

Offices: New York, 575 Madison Ave.; Cleveland, 3537 Lee Rd.; Chicago, 620 N. Michigan Ave.; Los Angeles, 6535 Wilshire Blvd.; Atlanta, 1722 Rhodes Haverly Bldg.

MODERN PACKAGING

The Complete Authority of Packaging—A Breskin Publication



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keeps
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VEL, packaged in Hi-fax, as demonstrated on television by Carol Reed



"BIG PICTURE"

Container molded by: IMCO Container Corp.
Owens-Illinois Glass Co., and Plax Corp.

Hi-fax puts Colgate-Palmolive Company in the front line of the merchandising parade with this attractive, sales-compelling container for its popular dishwashing detergent VEL. In designing a plastic container for VEL, Colgate-Palmolive Company turned naturally to Hi-fax, high-density polyethylene, to obtain the unmatched combination of features in a blown bottle which only this pioneering material can provide.

For the consumer, a Hi-fax package spells added convenience and safety. This new VEL bottle is durable and dent-proof, can't scratch sinks and counters, discolor, rust, or corrode.

Bottle makers, too, like Hi-fax because it contributes to the rapid, economical, trouble-free production of a container of uniformly high quality and reliability. The demand for Hi-fax has never been greater . . . its leadership is recognized on all fronts.

You, too, can put your product in the big picture with an attractive, low-cost, blow-molded container made with Hi-fax, the plastic that sets the standard which other materials strive to match.

We'll be happy to help with your product planning. Call or write:



HERCULES POWDER COMPANY

INCORPORATED

Hercules Tower, 910 Market Street, Wilmington 99, Delaware

CP60-12



INTERNATIONAL PAPER—The Ultimate Source



New paper withstands 90% humidity for 360 hours

(More packaging news from International Paper)

Read how this new moneysaving kraft paper withstood two weeks of constant high humidity.

To prove the moisture-resistant quality of International Paper's new Hy-poly kraft, we subjected it to this severe test.

The Hy-poly bag was filled with an extremely hygroscopic chemical and *steamed* in 90% relative humidity at 100° F. for 360 hours. (Unprotected, under these conditions, the test chemical takes on 2½ times its weight in water in about *one hour*.) When the bag was opened, 15 days later, the crystals were as *dry as sand*.

New Hy-poly not only resists humidity, it saves you money, too. From \$2 to \$16 per thou-

sand multiwalls. And with a coating about *half as thick* as medium- and low-density sheets, you get equal, if not greater, moisture-vapor protection.

Hy-poly is available in both bleached and natural Gator-Hide[®] kraft and in our new Gator-Hide Extensible Kraft.

The constant development of new packaging papers requires vast resources, skilled craftsmen and modern facilities. We have all three.

That is why International Paper can provide you with the widest range of papers, boards and packaging assistance in the industry. Call us or contact your converter—he's probably been doing business with us for years.

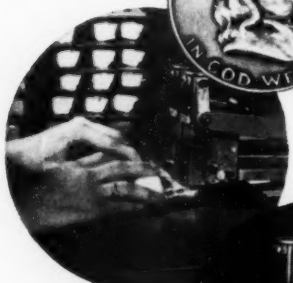


INTERNATIONAL PAPER New York 17, N. Y.

Manufacturers of papers for magazines, books and newspapers • papers for home and office use • converting papers • papers and paperboards for packaging • shipping containers • folding cartons • milk containers • multiwall bags • grocery and specialty bags and sacks • pulps for industry • lumber, plywood and other building materials

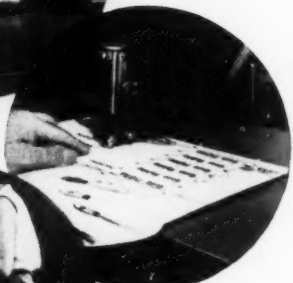


Change to Bostitch **FOR BETTER PROFITS**



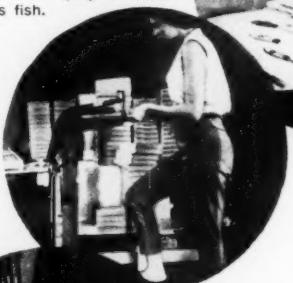
Attaching bird food specialties to display cards with Bostitch stapler increased production an estimated 60 per cent, cut stapling time more than 50 per cent. Product also has better appearance and handles and packs easier.

These manufacturers did...and increased packaging speed, lowered costs, moved more goods



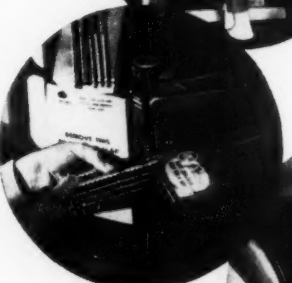
Bostitch stapler fastens elastic loops to display cards which hold 12 four-inch plastic tubes containing fish lures. Stapling permits more effective display of lures to help catch customers as well as fish.

With versatile Bostitch stapling you also get protection against pilferage and loss, savings in storage space, and many other advantages.

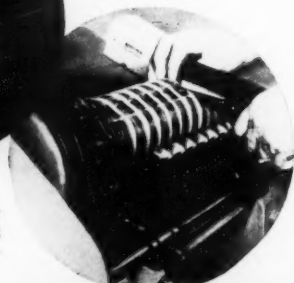


Display cards with can openers stapled on increased sales 100 per cent. Better product display resulted in a better profit picture with help of Bostitch stapling.

To discover how you can increase the efficiency of your packaging operation, call your nearest Bostitch representative, one of 350 who work out of 123 U. S. and Canadian cities. Or write to 490 Briggs Drive, East Greenwich, Rhode Island.



Operator cards approximately 500 nutcrackers an hour using six Bostitch staples to a card. Nut picks require only two staples. Bostitch equipment has eliminated holding failures and increased volume to meet chain store requirements.



Bostitch stapler binds 10-yard lengths of nylon leader into individual coils on winding machine. Stapling replaces hand tying, speeding operation 25 times.

Fasten it better and faster with

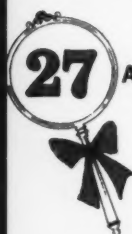
BOSTITCH®

490 BRIGGS DRIVE, EAST GREENWICH, R. I.



Awards

... A REFLECTION
OF FINE COLOR PRINTING



27 AWARDS REFLECT THE QUALITY AND VERSATILITY OF U-S COLOR PRINTING

The image of fine color printing, as reflected in our mirror of awards, can also reflect the quality of your product in a wide variety of packaging and advertising materials. This is important to you because color printing is the looking glass through which customers judge your product in competition for sales. Make certain your product receives its share of recognition through U-S quality that demonstrates what we mean when we say "Color Printing is our Baby".

LITHOGRAPHERS AND PRINTERS NATIONAL ASSOCIATION COMPETITION

The many award winning entries in this years Lithographers and Printers National Association Competition were selected for outstanding qualities of eye-catching design, functional merchandising and fine color printing. These packaging and advertising materials, illustrated here, are representative of the wide variety of products manufactured in 8 modern U-S plants strategically located from coast to coast.

outdoor posters



displays



POP Light Display



Display Cards



Window Display



Display Cards

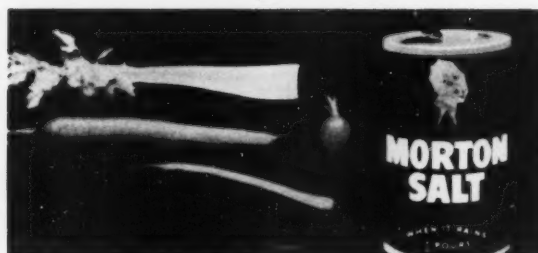


Motion Display

art prints



1-2-3 Sheet Posters



Car Cards



Combination Displays

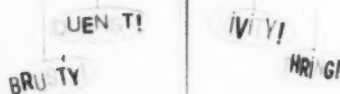
cartons



wrappers



book jackets



In-Store Display

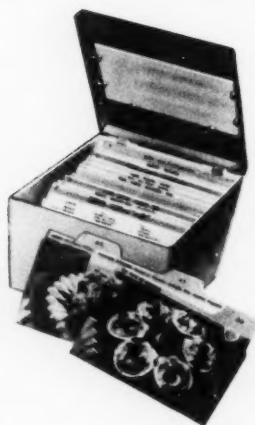


UNITED STATES PRINTING & LITHOGRAPH
DIVISION OF DIAMOND NATIONAL CORPORATION

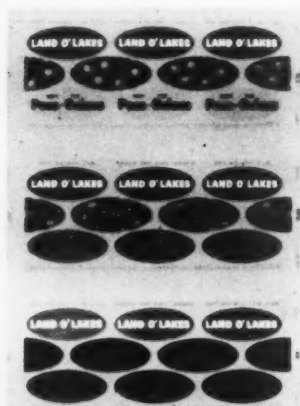
specialties



Ad Specialties

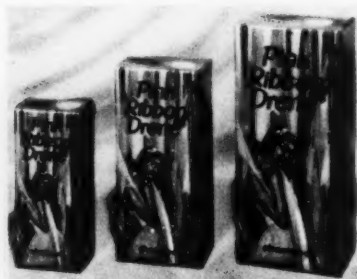


labels



folding carton competition

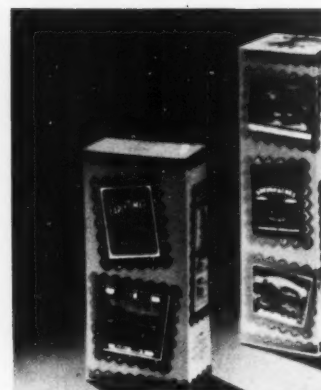
The products illustrated in this section are winners of some of the most coveted awards in the packaging industry. Each carton was selected by judges of the annual Folding Paper Box Association Competition for outstanding qualities of merchandising appeal and fine color printing. Let us further demonstrate our ability to produce award winning and sales oriented packaging and advertising materials by contacting your nearest U-S Sales Office.



Merit Award for General Merchandising
Superiority, Cosmetics and Personal Accessories



Merit Award for General
Merchandising Superiority, Food Products



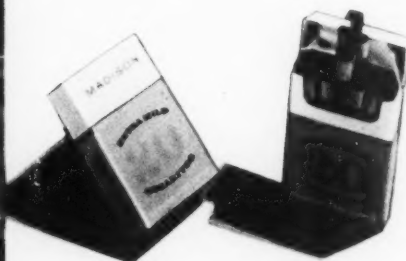
Merit Award for Technical
Superiority of Lithography



Merit Award for General Merchandising
Superiority, Sporting Goods and Toys



Merit Award for General Merchandising
Superiority, Tobacco Products



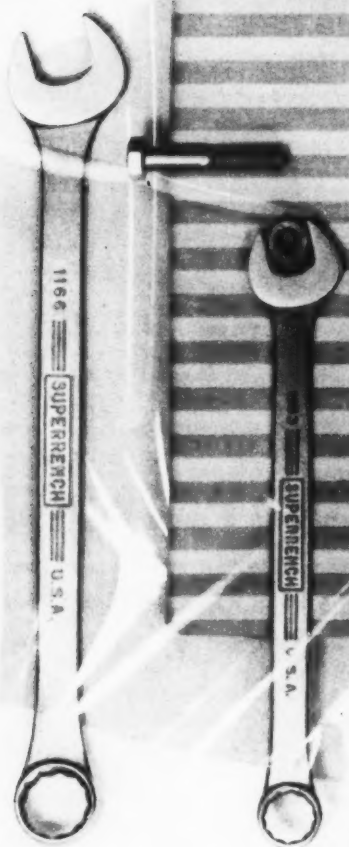
Merit Award for General Merchandising
Superiority, Tobacco Products

UNITED STATES PRINTING AND LITHOGRAPH
DIVISION OF DIAMOND NATIONAL CORPORATION



Executive Offices New York 22, New York
Sales Offices in Principal Cities

PLANTS: Baltimore, Md., Cincinnati, O., Erie, Pa., Long Island City, N. Y., Mineola, N. Y., Philadelphia, Pa., San Francisco, Cal., St. Charles, Ill.



Now, one polyethylene packaging film with **both strength and clarity**

Extruded from new dual-purpose film resins, this new type film is also distinguished for good printability, and a broad heat-sealing range that eases fabrication, reduces scrap, speeds up conversion rates. Send coupon below for 1) a list of qualified extruders of dual-purpose film made from Monsanto Polyethylene 37 (intermediate slip) and 38 (high slip); and 2) the new technical bulletin with valuable information and data on polyethylene film properties. Monsanto Chemical Company, Plastics Division, Springfield 2, Mass.

Monsanto
Polyethylene



MONSANTO ACTIVATOR IN **PLASTICS**

MONSANTO CHEMICAL COMPANY, Plastics Division
Room 794, Springfield 2, Mass.

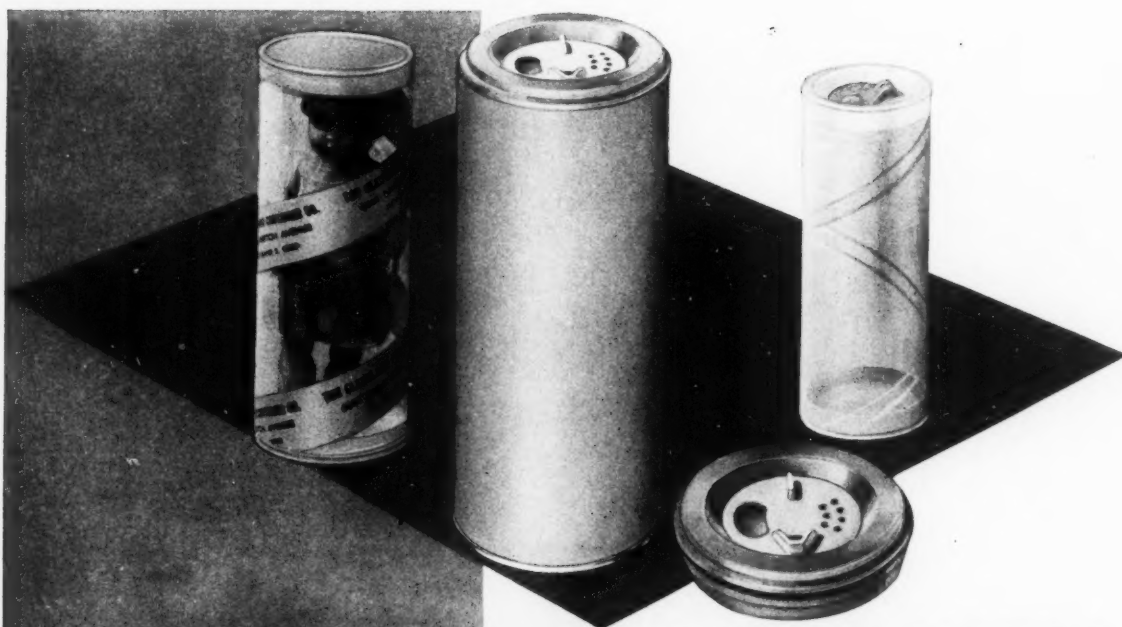
Please send me list of qualified extruders of dual-purpose polyethylene film;
also new technical data sheet.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

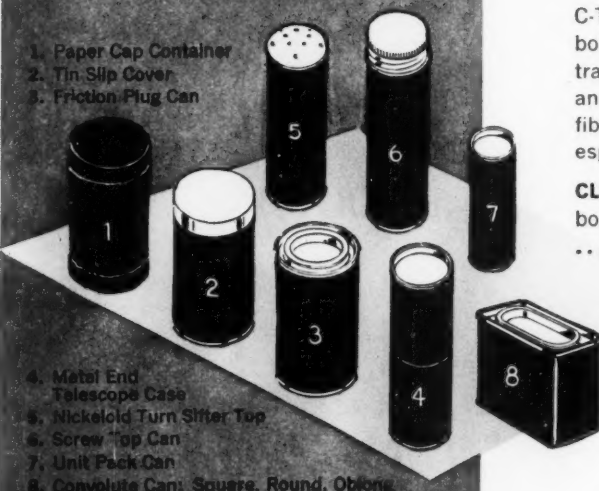
CITY _____ STATE _____



CLEVELAND CONTAINERS ARE DURABLE...ATTRACTIVE...PRACTICAL

BASIC DESIGNS

1. Paper Cap Container
2. Tin Slip Cover
3. Friction Plug Can



4. Metal End Telescope Case
5. Nickeloid Turn Sifter Top
6. Screw Top Can
7. Unit Pack Can
8. Convolute Can: Square, Round, Oblong

CLEVELAND TUBING

Every kind, type and size in chipboard, jute, kraft, fish paper, plastic films, etc. Light or heavy wall in diameters up to 24". Special tubing for electrical uses also available.

Functionally engineered and strikingly styled... designed for a wide variety of products that must "sell on sight!" Note typical examples above: Left... a C-THRU container featuring a plastic plug top and bottom, with a spirally wound printed band; right... transparent C-THRU container with plastic plug bottom and plastic dispensing top. Center... a can with a fibreboard body, metal bottom, and a dispensing top especially designed for easy stacking.

CLEVELAND CONTAINERS are made of strong fibreboard... spiral or convolute... all paper or composite... engineered for specific products.

Labels, wrappers, or direct printing provide attractiveness. Available with moisture- and grease-resistant liners. Wide range of metal and plastic closures.

Large production capacity... prompt deliveries... ensure complete satisfaction. Write nearest plant for our latest Packaging Brochure.

THE CLEVELAND CONTAINER COMPANY

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Detroit
Chicago
Memphis
Los Angeles
Plymouth, Wis.
Jamesburg, N. J.
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6201 BARBERTON AVE. • CLEVELAND 2, OHIO

ALL-FIBRE CANS • COMBINATION METAL AND PAPER CANS
SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES

CLEVELAND CONTAINER CANADA, LIMITED

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Sales Offices:
New York City
Washington, D. C.
Rochester, N. Y.
West Hartford, Conn.
Abrasive Division at Cleveland

World Report

Abstracts from foreign packaging magazines

A MODERN PACKAGING editorial feature

FRANCE

Regulations of color pigments in plastics

Communication No. 176 of the Ministry of Agriculture of Fraud Div., published in the Journal Officiel, according to *Emballages* (France), lays down the following rules for the application of color pigments in plastics and packages:

The coloration of plastics and packages requires the use of certain pigments and mineral or organic dyestuffs. Authorization for applying these agents is subject to the same regulations as are in force concerning composition of packages: The coloring matter shall never leave notable traces of its components on foodstuffs, neither shall it contain any substance which is toxic. Moreover, it is not allowed to make use of any coloring matter unless specially indicated.

In a meeting on Oct. 19, 1959, the Upper Council for Public Health in France has given its approval to a list of substances attached to the communication, substances which are considered acceptable from the viewpoint of public health, for use in the coloration of packages under provisions described and with the following restrictions:

- (a) The pigments and coloring matter shall be of a high degree of purity. Particularly, their content of mineral elements shall not exceed these limits:
 1. Lead, 0.01%
 2. Arsenic, 0.005%
 3. Mercury, 0.005% soluble in HCl/NiO
 4. Cadmium, 0.10% soluble in HCl/NiO
 5. Zinc, 0.20% soluble in HCl/NiO
 6. Selenium, 0.01% soluble in HCl/NiO
 7. Barium, 0.1% soluble in HCl/NiOContent of aromatic amines shall not surpass 0.05%.
- (b) In case colored matter has received any treatment physically or chemically before its application; it has to satisfy the principle laid down in the circular of Sept. 15, 1959, on the testing of products which serve as components of foodstuffs and of packages.
- (c) Carbon black shall not yield a benzene extract higher than 0.1% and must be free from benzo 3-4 pyrene.
- (d) Colored cellulose film, non-impermeable, may not be utilized otherwise than for foodstuffs of the following type: dehydrated vegetables, coffee, chicory, shell fruit and confectionery; nor is it allowed for covering fresh vegetable and fruit trays.

Colored cellulose film of at least 30 gr./sq. m. and rendered impermeable by a nitrocellulose lacquer is allowed for the packing of foodstuffs of the following type: biscuits, fritters, cheese, spiced cakes, caramels, dates, potato chips, bacon and salted meats.
- (e) When printing inks are utilized on the inside of the wrapping material, protected by an extra layer of coating only, this material is subject to comply with the regulations concerning the packaging of foodstuffs, provided that the material is adequate and is not liable to flaking off.*

GERMANY

Colored polyethylene in contact with foods

The range of pigments suitable for dyeing batches of polyethylene for film manufacture is relatively limited and they cannot always be considered non-toxic with regard to their chemical character, according to Dr. M. Föhr of Verlikon, Zurich, as published in an article appearing in *Verpackungs-Rundschau* (Germany).

Colored or tinted polyethylene films will usually prove to be quite harmless, he says, due to the phenomenon that

the pigment particles, when mixed carefully throughout the batch, will always be enrobed by a thin layer of polyethylene, thus preventing the dyestuff from coming into direct contact with the product to be packed.

As is well known, polyethylene is highly resistant to chemical attack and because (normally) the pigments are always completely surrounded by polyethylene, it is not to be feared that any chemical reaction may cause migration of the pigment into the foodstuffs. In this connection, the author points out that during the production of polyethylene using mercury as a catalyst, small quantities of the highly poisonous salts will remain in the batch; nevertheless, the film will be quite harmless. However, when the film is stretched, quite another picture presents itself. Because the molecular structure of the material shows very few cross-linkages, the binding force is comparatively weak. Although the tensile strength increases considerably in the direction of the stretching, the otherwise enormous chemical resistance decreases for quite a range of chemicals. Actually, what can happen in colored film is that a breakage of the skin in which the pigments are embedded may occur, thus making them liable to chemical attack.

Extruded films and sheets and blown tubing, when poorly processed, often show stretching only in one direction. When stretching in one direction is more than 50%, the susceptibility against chemical attack will be present. At the same time, the danger of toxicity appears and it seems clear that these films are not suitable as packing materials for foodstuffs. In his experiments, the author was able by chemical treatment (also optically) to locate particles of pigment on the surface. In another experiment, he packed slices of apple of a particular type in a green-pigmented film and after a certain period of storage, he found not only that the fruit had acquired a greenish taint, but moreover, the film whenever in direct contact with the product was in a state of deterioration. In comparison, carrying out the same test with a green-pigmented film which definitely had not been submitted to stretching, no discoloration of the fruit took place, nor did the film show any structural alterations under the microscope.

The same performances as described above can be expected from stretched non-colored material when processed with catalysts which are toxic. In this connection, one has also to keep in mind that these types of polyethylene are mainly built up of molecules having a linear structure and, contrary to normal (low density) polyethylene, have only a very small amount of cross-linkages. Already with very little stretching, the embedded particles of mercury salts tend to migrate to the surface and chemical reactions are liable to take place and thus result in contaminating the product. Also important are the quantitative proportions of the dyestuffs and other additives.*

AUSTRALIA

Export markets from Suez to Japan

For export, the world is divided into four major areas by J. McCulloch, export manager, Kraft Foods, Ltd., Australia, who points out some striking differences that should be noted by packagers for the area which he identifies as Suez to Japan. In an address before the National Packaging Assn. of Australia in Melbourne, reported in *Australian Packaging* (Australia), he said: "I will pass lightly over the first three—the American Continent, the United Kingdom and Free Europe—because in each we are dealing with people whose thinking and outlook is more or less the same as ours. In that little area, Suez to Japan, there are some

*For additional information, write: World Report Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.

World Report [Continued]

1.2 billion people, projected as likely to be two billion by 1980. In this area everything is different—language, diet, customs, standard of living, but most particularly purchasing power . . . but changes are so rapid that in another 10 or 20 years there will be vastly different requirements in those markets. You will find your product will need to be in different packaging and in a different form.

"The major change in the marketing habits of these areas is of the greatest importance to us. We tend to think that supermarkets and self-service stores are confined to what I might call the English-speaking world. This is far from correct. In Singapore, Hong Kong, Manila and in a number of other places, you'll find supermarkets as good as anything we have here. In the old days of the Arab store, the Indian Bazaar and the Chinese stores, your products were simply stacked up to the ceiling on shelves, with no thought being given to their presentation. This is still true in part, but the situation is changing."

Mr. McCulloch emphasized the need for the essentials of package protection for sea shipments and rough handling, for all kinds of climatic conditions, of unmistakable identification in the proper languages, of complete information on the packs for self-service selling.

But he said there was probably not so much importance to be attached to color and design as some packagers believe. It has been said, he stated, that the Chinese consider white a funeral color and purple a mourning color, but if you go into their shops today you will find a number of products from America with a lot of white combined with other colors. Economy of production is forcing many firms to use a standard pack and in many instances dealers point out that it flatters the consumer's ego to take on the habit of buying Western goods.

He points out illustrative treatments that might cause offense: for example, the cow in India where the cow is sacred, birds and animals as brand symbols where illiterates may confuse them with what the package contains.

The problem of high cost in areas where purchasing power is low may sometimes be overcome, he believes, by providing smaller sizes. The customer's ego is boosted if he can take home a tin of something of foreign make, even if only occasionally—and he can do this more often with a 4-oz. package instead of a 12-oz. one. "We have found these small sizes are a plus in export sales," he said.*

GREECE

International fair at Thessaloniki

American packaging techniques were demonstrated for the people of Greece at the 25th International Fair at Thessaloniki, Salonika, Sept. 4-24. According to the Office of International Trade Fairs, U.S. Dept. of Commerce, sponsoring the exhibit, products of 100 American companies were shown, including several types of packaging machinery.*

ENGLAND

Polyethylene-wrapped bread

England is going for bread wrapped in polyethylene film in a big way, according to an article in *British Plastics* (England). C. T. Coward, Bakelite, Ltd., an affiliate of Union Carbide Corp., reviewing the development, says:

"There are good grounds for believing that the United Kingdom is ahead of the United States in the development of techniques for overwrapping bread in polyethylene film. Large bakery groups are actively engaged in trials and many people in touch with the development believe that it will reach fruition in the very near future."

Commenting on production factors, the writer noted that a pound of 1-mil polyethylene film would wrap 113 loaves of bread, compared with 71 loaves for another leading film. The standard English loaf of bread is 2 lbs. in weight and

requires 282.25 sq. in. of wrapper (14½ by 16½ sq. in.).

In terms of materials cost, using two-color printing on all wrappers, polyethylene was 0.64 pence (about 0.75 cents) per loaf, in contrast to standard transparent film at 0.98 pence (1.15 cents).

Two-color-printed polyethylene film reportedly is still slightly more expensive than waxed paper, but has production and sales advantages. Two British firms with combined capacity of 60 new machines per month are supplying suitable overwrapping equipment. Speeds are 40 loaves per minute. One new machine under development reportedly slices and automatically wraps 60 loaves per minute.*

RUSSIA

Soviet admits lag in plastics

Three Russian scientists, V. Kargin, V. Smirnow and M. Rokhlin, all members of the Russian Academy of Science, have recently pointed out that Russia is far behind in the plastics industry compared with the high degree of development in other parts of the world. This was the import of a comment in *Plastica* (The Netherlands).

An example mentioned, according to this account, is the poor quality of polyvinyl chloride, which has not shown any improvement in Russia in the last 10 years. This material is not clear and transparent, has a very poor aging factor and is not very suitable for industrial converting.

The three Russian scientists stress the point that this trend is not due to lack of knowledge or under-equipped laboratories. They are of the opinion that the poor quality of Russian plastics articles is caused mainly by bad planning and the fact that the industry is not sufficiently modernized. This, *Plastica* points out, is mainly the result of the bureaucratic system. Similar criticism was expressed in relation to other sectors of the chemical industry, for instance those dealing with the production of cellulose fibres based on cellulose derivatives.*

GERMANY

Analysis of a stand-out

An awareness of design strategy to win envied prominence on the shelf is suggested in an abstract of an article by F. Herberth appearing in *Die Neue Verpackung* (West Germany). "Among a number of types of packages, all of which follow the rules," it is stated, "the one that does not attract your attention. Ten red posters may all be equally effective, but they enhance the effectiveness of one green poster. Present-day shoppers demand the beautiful, but many lines of goods do not meet this requisite. A package that 'noises' when displayed in a shop will noise at home, but there is a sound-level control and optional noise, too, is fatiguing. To be so inconspicuous as to become conspicuous has always been a sign of good quality. The package must explain and show what is offered. A misdirected shopper is in the long run equivalent to a loss."*

FRANCE

Roquefort in portion packs

To meet requirements in foreign markets, particularly self-service stores in the United States, La Societe Anonyme des Caves de Roquefort is marketing a handsomely decorated round box containing eight heat-sealed, aluminum-foil-wrapped, 100-gm. wedges of French Roquefort cheese as well as a family-sized foil-wrapped wheel. According to *Emballages* (France), this step was taken after careful study of foreign markets and selling procedures in those markets. Housewives who buy their provisions once or twice a week should have single-service or family-sized units, capable of being stored in the refrigerator for several days without dehydration impairing taste and flavor, it was reasoned. Accordingly, new heat-sealed, laminated-foil packages, replacing earlier tin foil, were adopted after extensive research to assure efficient protection and shelf life.*

*For additional information, write: World Report Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.



flowers



Bright tin plate or decorative enameled ends, with semi-perforated or plain plugs, provide versatility in competitively priced Harcord Canisters.



fish



Colorful plastic closures enhance the beauty and utility of these Harcord Canisters, available in all shapes and sizes. Contents may be poured, sifted or spooned.



fruits



This sturdy rectangular canister with moisture resistant body wall demonstrates how Harcord quality protects the contents.



fleas



The inner dome on this revolving top canister has easy-to-open holes which are factory sealed for protection against sifting.

YOU SELL IT BETTER, YOU SAY IT BEST IN . . .

HARCORD CANISTERS

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TASTE-APPEAL PACKAGING

with the
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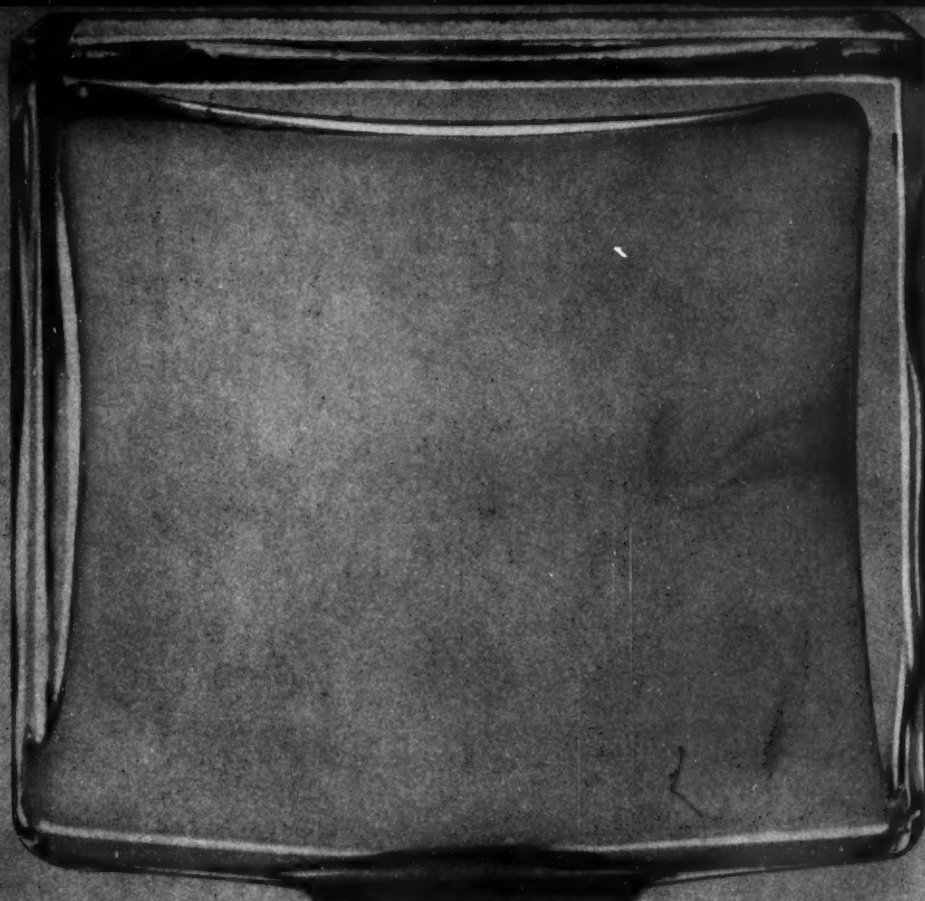
Candy, like many other products, stays extra-fresh and tasty in Du Pont cellophane. That's because versatile Du Pont cellophane can be specially coated or laminated to meet a variety of specific protective needs . . . including retention of distinctive flavors and aromas. And your product in a clean, clear cellophane showcase sparks buying impulses—people like to see what they buy! Add cellophane's efficiency on high-speed packaging machines . . . beautiful color printing . . . versatility in package construction—and you can see why it's the choice of so many candy makers and other smart packagers.

Find out why it's profitable to start your package planning with a Du Pont cellophane. Only Du Pont offers over 100 special types. Ask your Du Pont Representative or Authorized Converter of Du Pont Packaging Films to evaluate your specific needs. Du Pont Co., Film Dept., Wilmington 98, Del.



REG. U.S. PAT. OFF.
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... THROUGH CHEMISTRY





*Fill
and forget
with BEETLE®
plastic caps*

Manufacturers of consumer products using container caps know that BEETLE® plastic has never failed them in twenty-five years of steady use. Even perfume esters and acetone solvents make no headway against molded BEETLE urea. On the shelf, BEETLE closures won't build up electrostatic charges that attract unsightly dust. And they hold firm and tight during shipment and storage. BEETLE comes in any color, can be molded in practically any shape, to fit any design. Keep your customers happy and content by specifying BEETLE plastic caps every time.

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Editorial Memo

Consumers a-writhe!

Consumer Reports, that militant champion of the unwary shopper, has found a new issue with which to whip its readers to a lather of indignation. This time the issue raised is packaging; specifically, what that magazine interprets as "deceptive packaging."

"Our readers writhe," says the headline in the September issue. "There's a growing rebellion against this way of cheating the public." The article is full of words like "robberies" and "thievings." It even calls down the shades of Jehovah and Ezekiel.

Letters from readers register such complaints as the allegation that a plastic clothesline was 8 in. shorter than the stated 50-ft. length and that Kleenex tissues are now *one-quarter of an inch* shorter than they used to be. (Nowhere is the observation made that atmospheric conditions could cause that much shrinkage or expansion in such products.)

The cue to the attack was a leading question in *Consumer Reports'* last annual questionnaire to readers. Would readers like to know more about "deceptive packaging"? That's like asking a Presbyterian if he's against sin. But since 85% of those answering the questionnaire checked this subject, the magazine concludes that its readers are writhing.

Now what exactly do they mean by "deceptive packaging"? The attack seems to center on instances in which net weight or net content of a package has been reduced without corresponding reduction in price. Nowhere is the point made that the price might have had to be *increased* if the previous content were continued. Nor is there any concession to the possibility that the consumers themselves may prefer a smaller size of package, or to the fact that the resulting smaller sizes generally entail a higher per-unit packaging cost.

Most blatant of all, *Consumer Reports* simply overlooks the fact that it is really impossible to deceive any consumer who can read. *The law requires that net weight or volume of contents be truthfully stated on the label.* That this is adequate protection for the consumer, regardless of any reasonable size or shape of the package, was once more upheld in Federal court only a few months ago. Dishonest weight statements occur rarely today and are severely dealt with under the law.

"Let the buyer beware," although a basic tenet of law, is a little rough. "Let the buyer *be aware*" is a better precept today. And *Consumer Reports* would do a better service if it spent less time on indignation and more on educating its readers to read.

Packagers, for their part, should be aware of this new agitation and take care that contents are printed not merely legibly, but so prominently that the statement cannot be misconstrued as an effort to hide rather than to disclose the contents of a package.

The Editors

Modern Packaging, Executive and Editorial Offices, 575 Madison Avenue, New York 22, N. Y. Teletype: TWX-NY 1-3063. Cable address: "Breskinpub."

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Foamed plastics on the rise

*For reasons of economy,
protection and merchandising efficiency,
these ultra-light materials,
now taking many forms
both rigid and flexible,
may prove to be
the packaging sensation of this decade*

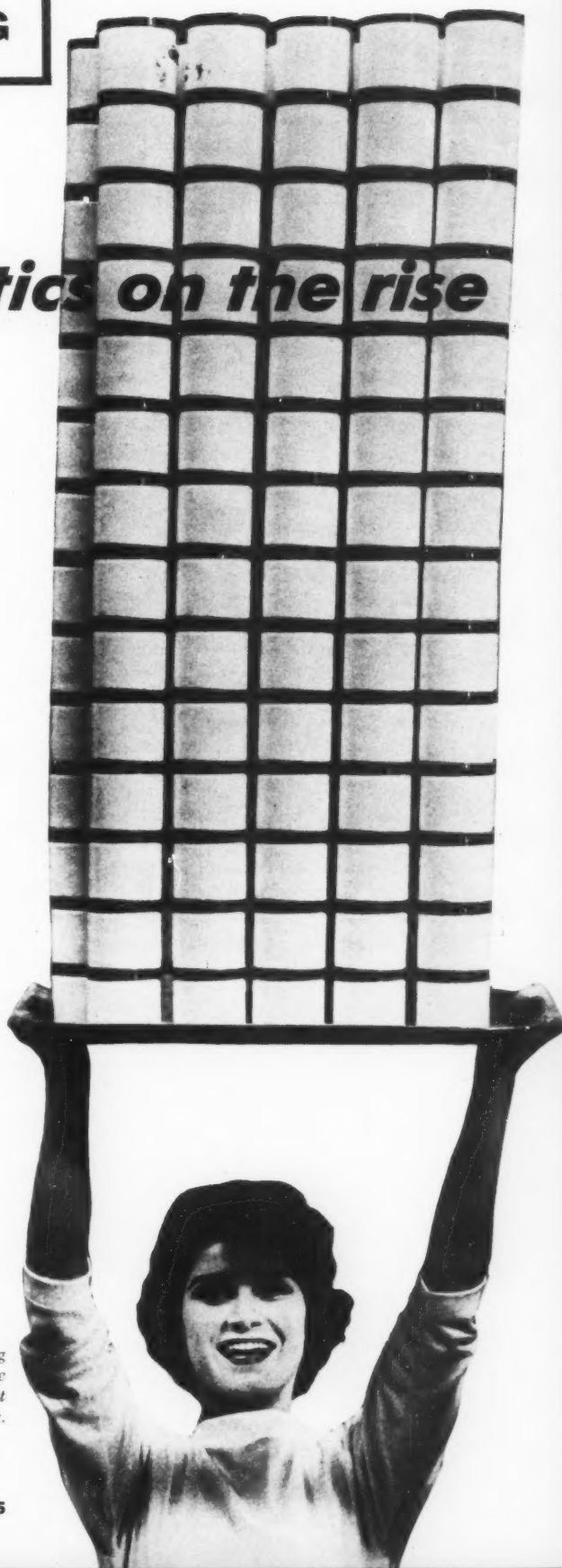
When the packaging history of the 1960s is written, the most exciting development of the decade may well prove to have been that in foamed plastics.

These featherweight, aerated cellular materials have had scattered packaging applications for the last 10 years, but they are now turning up in a bewildering variety of forms, used for a dozen different purposes, in almost every field of products you can name. It's already one of the biggest trends of the day and it's growing fast.

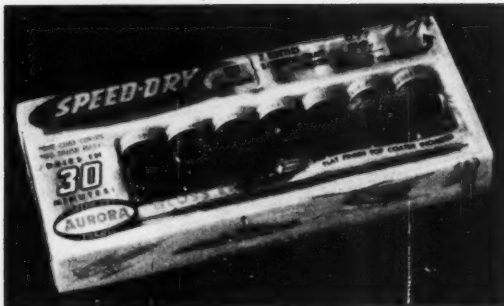
Principal product fields so far have been cosmetics and instruments. But there seems to be no limit to its packaging applications.

As a raw material, foamed plastics are appearing in pre-expanded slabs for fabricating, as expandable beads that can be molded or extruded, as thin films and sheets which can either be used as such or be laminated to paper and paperboard, and as foam-in-place formulations that create foamed structures right in the packager's plant. Polystyrene and polyurethane are the plastics most frequently used to create these forms, but other plastics such

Lightest in weight of all packaging materials is foamed plastic, in this instance molded polystyrene-foam jars, a recent development. Jars, Sheffield Plastics, Inc.



Contoured foam with plastic wrap—a big trend



Function in use is provided by molded foam tray that protects bottles from breakage, serves as mixing tray. Printed cellophane seals package and tells story. Tray, Sulliford Products, Inc.

Protection and display are achieved by this molded-polystyrene block with printed acetate sleeve. Shipper weight is cut 66%. Molding, Worcester Modified Plastics.

as polyethylene, vinyl and urea formaldehyde—under development or used in big volume in other product fields—may soon challenge the established plastics materials in foam packaging.

In applications, the foams are now moving far beyond their original use as cushioning platforms in paperboard or plastic boxes. They are used frequently now as product-conforming blocks which, with a film overwrap, provide a complete package.

One of the latest innovations is a molded, screw-top jar of foamed polystyrene. This new container offers the advantage of radically lower shipping weight for many jar-packaged products.

Flexible foamed films and sheets are being thermoformed into cups and are even being laminated and converted into cartons and boxes.

Some of the thin but rigid materials are being wound into canisters that can be capped with thermoformed sheet-foam ends.

Now in increasing use is a new type of board for shipping containers which employs a sheet of polystyrene foam as the stiffener between plies of kraft liner board, in place of corrugated paper.

Insulation against heat and cold is a factor in many applications for foamed plastics materials.

Why foam?

The basic reasons for the trend are the qualities which all foams have in common: ultra-light weight (a typical block of foamed polystyrene is 96% air), inherent cushioning properties, ease of contouring to precise shapes and very low cost—since most of them use low-cost resins and use so little of

it in relation to volume. But there are a multitude of special reasons for using foams in special cases.

Expandable polystyrene resin is priced from 2/100 to 6/100 cents per cubic inch and pre-expanded polystyrene slabs from 7/100 to 14/100 cents—enabling these materials frequently to replace conventional low-cost structural and cushioning materials with substantial savings. In one application, foamed polystyrene has proved less costly even than papier maché.

Polyurethane, while more expensive (7/100 to 12/100 cents per cubic inch), is an effective shock absorbent in such small quantities that it also can produce savings in packaging applications.

These economies stretch to fabrication, too, since the foams can be more easily worked and assembled than many other materials and, when molded, generally require less expensive molds than are used to form other rigid materials. In the case of foam-in-place formulations, usually no molds are needed.

Foams are less dense than any other packaging material, hence can save tremendously in shipping weight. While density can be varied to suit specific needs, most foams in commercial use range from 1 to 3 lbs. per cubic foot, compared with about 10 lbs. for corrugated and 4.5 lbs. for curled hair. The new foamed polystyrene jar is only about 1/20 the weight of a similar glass container.

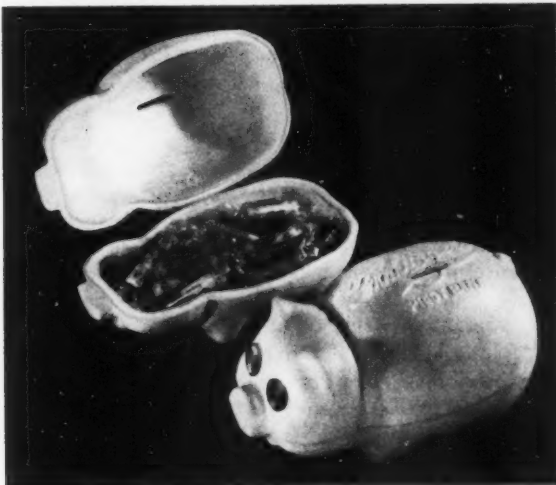
Among the most shock resistant of all materials, foamed plastics have already chalked up an awesome protective record—many times completely eliminating shipping breakage of extremely delicate electronic parts or fragile ceramic products.

Although the first use of foams in consumer packaging goes back 10 years, volume use is very recent. The principal material has been rigid slabs of pre-expanded polystyrene foam, because of its pure white color and versatility of fabrication. But, though new and clever forms of this material are being devised every day, it is the recent development of even lower-cost expandable polystyrene foam that has resulted in the rigid and flexible foam

sheets and molded foam containers that may change the entire course of packaging in many industries.

Expandable foam is produced from little granules of polystyrene resin that are filled with a propellant. When subjected to heat in an extruder or mold, the beads expand and fuse tremendously, forming either rigid or resilient foams with a closed cellular structure. The molded product also has a marbled appearance. These beads of polystyrene have even

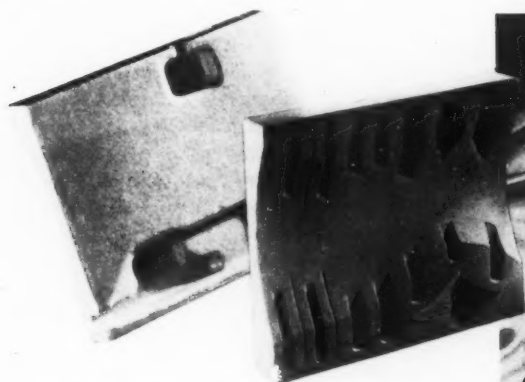
From piggy banks to silver chests, molded foam saves money



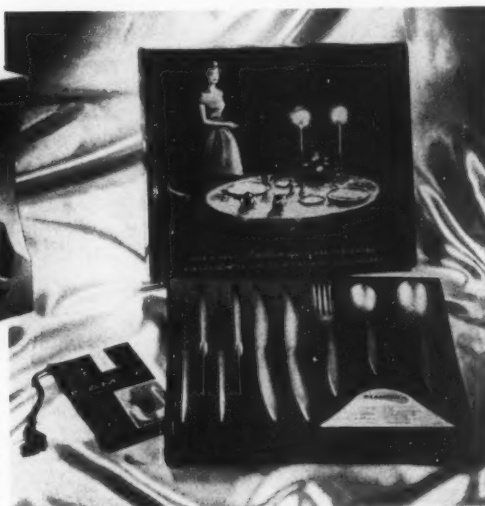
Less costly than the papier maché it replaces, piggy-bank package for Fralinger salt-water taffy is molded of expandable polystyrene. Halves are sealed with polystyrene adhesive. Molding, Pycofoam Corp.



Utmost security for delicate and costly Daystrom servo motors is achieved with two-part case of expandable polystyrene. Its cavities handle products of three different sizes at 50% saving. Molding, Pycofoam Corp.



Flocked platform of expandable polystyrene, used in a set-up box, adds luxury look at low cost to Sears Roebuck stainless-steel tableware. Top and bottom views of platform (above) show molding contours that minimize use of material. Molding, Worcester Moulded Plastics.

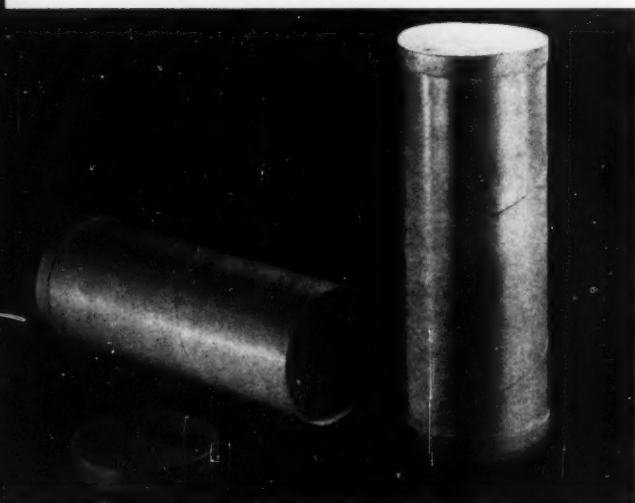


Thermoformed blister pack



Polystyrene foam sheet can readily be thermoformed. One of the first examples is this contoured cavity for a fishing lure, used by Falls Bait Co. Package is light green 0.075-in. sheet, covered with 5-mil oriented polystyrene stapled in place. Novelty of the material and fact that it serves as a carrier for the lure adds to its appeal. Thermoform, Applied Research & Development Corp.

Spiral-wound canister



Sheet and film forms of foamed polystyrene are just coming into use, have many possibilities. General Clarifier Corp.'s canister is a highly soluble package for carbon black, used by dry cleaners. Polystyrene, including the end caps, is soluble in perchloroethylene. Canister, Thermolite Tube & Container Corp.

been used in foam-in-place applications,¹ though they require the application of heat.

The "pre-expanded" foam is a rigid structure of polystyrene that is cut into slabs and can be fabricated into packaging shapes with simple tools. The cut surface has an open cell structure.

Types of foam

Polystyrene foam, both pre-expanded and expandable, is far and away the leading packaging foam in use at present, totaling 2,500,000 lbs. last year. This figure (which is more than 60% above that of 1958) is expected to double in 1960. Beyond this year, estimates range widely, but all indicate soaring increases in its use for packaging.

Figures for polyurethane foams are unobtainable—an indication of the minor role this more expensive material has played so far in packaging. But suppliers, converters and packagers are rapidly becoming more interested in polyurethane as a result of new and more economical packaging constructions. Basic resin suppliers are now predicting a packaging market of "several million pounds" of polyurethane foams within the next few years.

In the developmental area, polyethylene foam is nearest to volume application and is regarded as a tough, flexible material that potentially will have a favorable price (though the cost of this material is now 15/100 cents per cubic inch).

Urea formaldehyde foam, while still only experimental, is reported capable of achieving the lowest price of any plastic foam material, because of the very low cost of its basic ingredients.

Foams of vinylidene chloride and its copolymers, while they are used today only in non-packaging applications, are expensive, but may find specialized packaging applications in the future.

Contoured blocks

Some of the most exciting progress in foamed plastics is now being made in molded foams—contoured blocks that are created from the expandable form of polystyrene resin.

Molded foams have been rapidly adopted as components of paperboard packages² and, more recently, as all-foam containers³ with new functional and merchandising advantages.

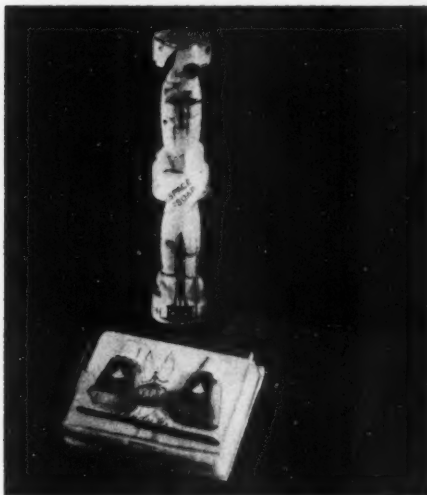
A striking example among these new packages is a molded foam container used for microscope sets by the A. C. Gilbert Co., New York. There, a vertically foamed "platform," with contoured recesses that hold the microscope and accessory parts, is

¹ See "Foamed Polystyrene 'Coat' Cuts Damage and Costs," MODERN PACKAGING, April, 1960, p. 111.

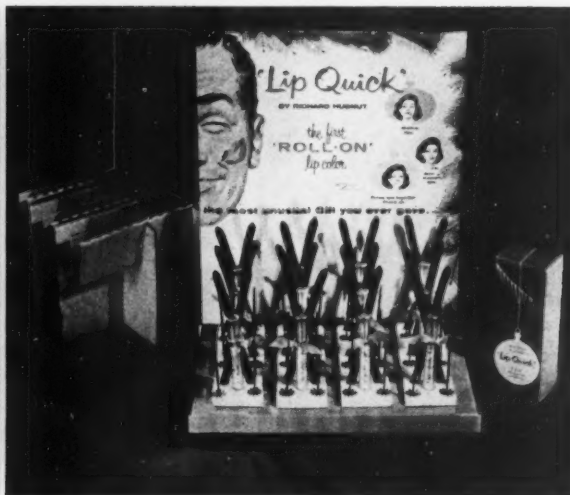
² See "Cametas Nested in Polystyrene Foam," MODERN PACKAGING, March, 1960, p. 181.

³ See "Polystyrene Foam Upgrades Display Appeal of Fishing Reels," MODERN PACKAGING, April, 1960, p. 93.

Foamed blocks can be machined to functional shapes



All-plastic packages, used for manicure set and "Space Soap" marketed by Tom Fields, Ltd., combine acetate sheet with rigid foam slabs and disks that hold and protect the products.



Convenient set-up of counter-display package by Hudnut uses polystyrene foam also for the novelty effect, with simulated skis and poles resting on "snow" base. Corrugated divider permits display to be shipped fully set up. Fabrication, Feder Industries.

slipped into a 12-mil printed acetate sleeve and closed at the ends with acetate caps. The new package provides both increased protection and dramatic shelf appearance, with savings of 50% in package cost and 66% in container weight over the previously used hinged metal cabinets.

An unusual combination package and end-use tray, constructed of molded polystyrene foam, is used in a kit of enamel paints for toy models by Aurora Plastics Corp., West Hempstead, Long Island, N. Y. Small jars of lacquer colorants and a brush are nested in the tray, which is then overwrapped with printed cellophane. The tray contains mixing pockets for the paints and can be used throughout the entire life of the product.

There is virtually no limit to the shapes that can be molded in this light foam material and ingenious packaging designs are possible that would be impractical or too expensive in more conventional materials. An example is a new piggy-bank package now marketed by Fralinger's, the Atlantic City candy firm that made salt-water taffy famous. This all-foam container, formed in the shape of a pig, is made in two parts that are flanged for an accurate fit. The top half contains a coin slit and embossed company trademark. When the candy is gone, a touch of polystyrene cement bonds the two halves together to make the bank. This sparkling white package has 3/8-in. walls and costs about



Deep cut-outs and fitted blocks of pre-expanded foam slab provide lightweight safety for this fragile ceramic decanter set, which is being marketed by Going Enterprises.

40% less than a previous pig-shaped container made from painted papier maché. It is also lighter and is markedly preferred by customers, according to the company officials.

A two-part matched package has been employed in industrial packaging, too. Daystrom, Inc., has just introduced a special, rectangular foam container for expensive and delicate servo motors that saves better than 50% in cost over the previous package, a complex combination of glassine, corrugated and chipboard. The new all-foam container is ingeniously designed so that a single size of package will hold any two of seven types of servo motors in three sizes. To achieve this flexibility, four recesses (in three sizes) are formed in the two halves of the molded block. The recesses are superimposed in X-patterns to save space. Molded ledges support the tiny motors, with the attached and coiled wiring nested in a well under the motor.

The importance that molded foam may have in the packaging field is underscored also by the new foam polystyrene jar. Twenty of these ultra-light-weight containers weigh no more than one conventional opal glass jar and the cost of the plastic package, according to its developer, is no more, or even less than that of glass.

There is significance in the treatment of these foam polystyrene jars, since foamed plastics generally are thought of as porous materials.

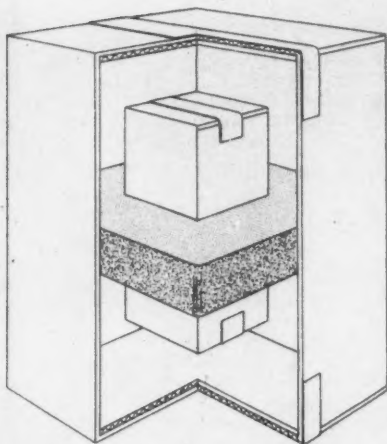
Uncoated, this foam jar is too porous for products other than non-hygroscopic powders. However, a jar with a spray-lined polymer coating has been devised that transmits less than 3% water vapor per year and will enable this foam container to be used for a wide range of products. Even with a coating, the jar is reportedly competitive in price with conventional opal glass jars. Such a jar is now reportedly being market tested by Colgate as the container for a cream shampoo.

Expandable foam is now moving into platform applications in set-up boxes,¹ an area in which the pre-expanded type of foam is already well established. The reasons given by Sears, Roebuck for its use of a fancy, decorated new foam "rack" are the flexibility of foams and special decorating advantages obtainable with this material, as well as the savings achieved in packaging labor.

Sears has just put three lines of stainless-steel tableware, in both six- and eight-place settings, into set-up cartons containing flocked polystyrene platforms that conform closely to the individual contours of each product pattern. Though the previous paperboard platforms were less expensive, Sears claims that the new foam components can be loaded faster and thus produce a stand-off in total packaging cost. In addition, the plastic-foam unit has

¹ See "New Approach to Plastic Platforms," MODERN PACKAGING, Oct., 1956, p. 133.

Foamed-in-place constructions offer a new concept of shipping safety



Resilient polyurethane is foamed in place in this suspension pack for a delicate electronic tube, shown diagrammatically. Inner and outer cartons are corrugated board. Said to cut costs 30%, construction is being tested by BCA.



Prize-winning package for General Chemical sulphuric acid uses foamed-in-place polystyrene completely surrounding carboy in this simple octagonal wirebound crate. It was "Best of Show" in recent competition which was conducted by Society of Packaging & Handling Engineers.

permanent re-use as a drawer fitting in the home.

To differentiate between the three price lines of tableware, the platforms are given separate decorative treatment. Those for the lowest-price product are unflocked; orange flocking is used for the medium-priced stainless, and a rich, gray flocking sets off the high-priced line of tableware.

Slab-type foams

Even old dogs can be taught new tricks and such is certainly the case with the "oldest" form of polystyrene foam—the rigid, pre-expanded open-cell slab or plank. Fabricating costs for simple contours in this plastic are lower than for any other foam.

These advantages have been put to work for nearly 10 years in special deal or display packages, platforms and even in a kraft-lined board for insulated shipping cases. Because of the open and textured surface of this rigid foam, it is generally regarded as subject to dusting unless protected by an outer package of other materials. And the material has been used more for its merchandising advantages than for protective cushioning properties.

Yet, one new packager utilizes nothing but this foam and a sheet plastic in a highly successful container that remains in use in the home. And two other recent applications demonstrate how ingenious package construction can combine both protective and merchandising factors.

The first use is a package for children's cosmetics by Tom Fields, Ltd., Englewood, N.J. Here, a foam platform is the entire base of the container and is machined to accept an acetate cover that fits tightly and gives a transparent three-dimensional look of luxury to the low-priced products. Bottles of nail polish and remover and manicuring instruments are nested in machined recesses in the block, which is used as a storage case throughout the life of the products. The only additional protection needed for the package is a paperboard sleeve that is used during shipping.

Another unusual example of foam and plastic packaging by this firm is a tubular acetate container for two rocket-shaped bars of boys' soap. Three cylindrical blocks of polystyrene foam are used to close the package and separate the bars of soap—primarily a protective use of plastic foam, but one that also adds a decorative touch.

Protective and merchandising aspects of pre-expanded foam are also employed in a clever lipstick promotion for the coming Christmas season by Richard Hudnut, Morris Plains, N. J. Featuring a delicate ski and ski-pole motif, this display package utilizes tiny blocks of polystyrene foam as a base to hold roll-on lipstick containers and the trimmings. The white foam simulates snow. Nested



Flexibility now has been achieved in a new, resilient type of polystyrene foam that can be made in thicknesses from a fraction of an inch to half a foot. Here, a carton containing a fragile product is wrapped with a thin foam sheet before loading in a master shipper.

in groups of 12 in a die-cut folding display carrier, the lipstick units are protected from vertical shock during shipping by the rigid foam. A series of folded, spring-like corrugated dividers that slip over the lipsticks absorb horizontal impact and also holds the lipsticks in vertical position.

The package for an expensive decanter set by Going Enterprises of Davisburg, Mich., illustrates the use of a suspension system that is completely protective in nature and is economically machined from blocks of rigid polystyrene foam. Cups and the top of the decanter are nested in a thick section of foam that lines one side of a paperboard carrier. The [Continued on page 294]

ACKNOWLEDGEMENTS: Producers of foam-plastic materials who contributed information for this article include: Allied Chemical Corp., New York 6; Armstrong Cork Co., Lancaster, Pa.; Dow Chemical Co., Midland, Mich.; Du Pont, Wilmington 98, Del.; B. F. Goodrich Co., Akron, O.; Koppers Co., Inc., Pittsburgh 19, and Mobay Chemical Co., Pittsburgh 34.

*Using wax-impregnated board to keep dampness both in and out,
a Maryland grower isolates sensitive leaves and buds of hydrangea plants
from root-earth moisture, cuts losses, saves time and money*

MOISTURE CONTROL WITH

The old but always profitable story of a new use for a packaging material that was not envisioned when the material was introduced is being told again, this time by a shrub grower who is substituting moisture-resistant corrugated board for traditional newspaper wrappers to control moisture around delicate hydrangea plants.

With this method, plus the use of standard corrugated outer shippers in place of wooden crates, the packer reports that (1) product damage has been reduced by more than \$3,500 for each shipment of 10,000 boxes of plants; (2) total packaging time has been cut one-sixth for an estimated 10% saving in labor costs, and (3) freight charges have been lowered 10%, according to the company, because of lighter shipping weight.

Most significant in this switch-over of packaging materials is the double job performed in this instance by the moisture-resistant corrugated board. When this wax-impregnated board was introduced to packaging, its principal initial function was to provide a shipping container that would stand up physically under water soaking, as in fruit and produce packing plants where filled containers are hydrocooled with water sprays prior to shipment. Due to the wax, the shipper itself is little affected by such water soaking, whereas ordinary corrugated boxes would disintegrate quickly.*

Now hydrangea grower Joseph S. Merritt, Inc., Dundalk, Md., is adding to the board's original function of water resistance and employing it to hold proper amounts of moisture around the plant roots while at the same time keeping excess moisture away from sensitive leaves and buds, which tend to develop fungi and mold when moist.

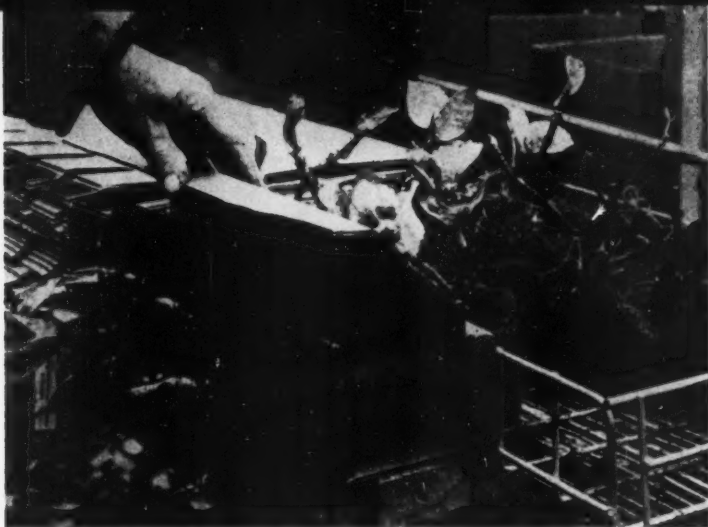
Using a die-cut rectangular tube of moisture-resistant corrugated to surround the damp potting soil of each row of plants and a liner of the same material within each shipper, both external and internal moisture are properly controlled. By virtually eliminating disease and other damage during shipping, the packer has largely wiped out an annual average replacement cost of 5,000 damaged plants that are valued at 70 cents apiece.

The 10% saving in labor costs is accomplished by replacing slower and more-expensive packing in newspaper and wood crates with a home-made jig that reduces the packaging period for the hydrangea crop from three to two and one-half weeks. A die-cut and scored square of moisture-resistant corrugated is folded twice along parallel lines to form a trough-like plant holder which fits into the jig. In a number of die-cut slots along one vertical edge, the stems of hydrangea plants are placed so that they protrude horizontally from the tray holding the roots and the surrounding moist earth. The remainder of the corrugated is then folded over to form a loose lid. A pre-scored liner of moisture-resistant corrugated board is bent and fitted into each shipper in such a way that the plant holders are kept firmly in place. These are packed in facing rows, giving the stems and buds a center area for air circulation. The shipper is then taped.

Merritt ships four different sizes of potted plants. By using varying sizes of plant holders and liners, all sizes can be shipped in only one size of outer corrugated container. Quantities thus range from 12 to 100 plants per shipper.

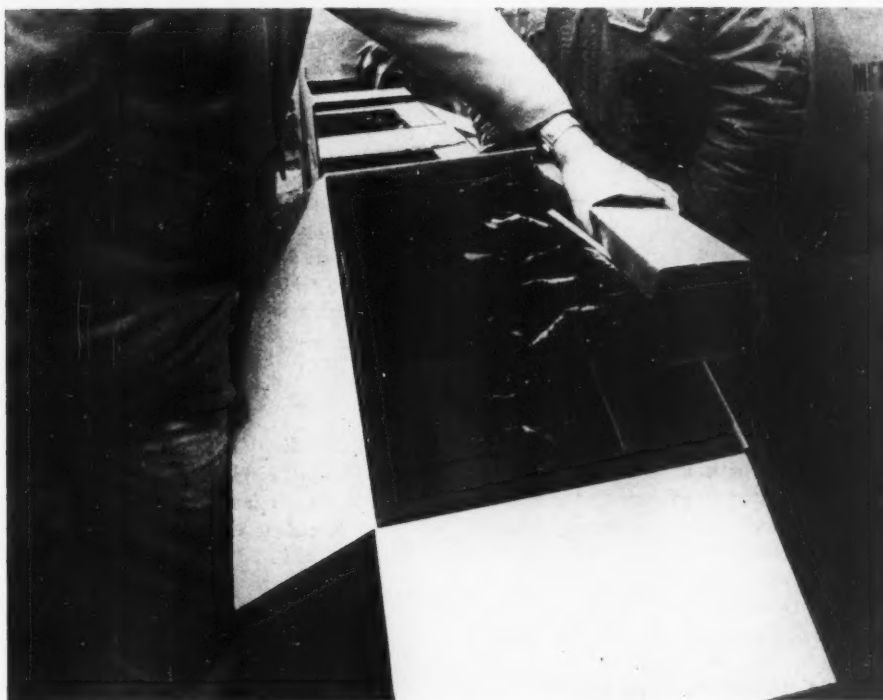
SUPPLIES AND SERVICES: Plant holders and box liners of "M/R" moisture-resistant corrugated board and corrugated shippers by West Virginia Pulp & Paper's Hinde & Dauch Div., Sandusky, O.

*See "Moisture-Resistant Corrugated," MODERN PACKAGING, Jan., 1959, p. 118.



Internal moisture control is provided by plant divider made of wax-impregnated corrugated board loaded in a home-made jig. Special board prevents potting-soil moisture from spreading to disease-prone leaves and buds of hydrangea shrubs.

CORRUGATED



External moisture control is furnished by liner of same moisture-resistant corrugated, shaped to hold facing rows of packed plants. Breathing area between rows also reduces water condensation on plant's sensitive leaves and buds.



Sturdy shippers protect shrubs from in-transit impact and shock, and provide large areas for product promotion.

Blister economy

Hang-up packages for a supermarket vitamin line demonstrate the production advantages of removable cavities; White Shield gets blisters for five products for the price of only one multiple mold



Concentrated selling demands flexibility in packaging. With "Drugmobile," White Shield offers miniature self-service drug store on wheels for supermarkets. Rack-hanging, illustrated, carded blister packs were a necessity in the absence of clerk service.

In thermoforming, engineers are aware of production efficiencies possible with the use of a multiple-unit mold with removable cavities. But many users of thermoformed blister packaging apparently are not yet alert to the substantial economies which are inherent in this production technique.

An impressive example is the saving in mold and sealing-die costs being achieved by White Shield Corp., New York, in using the procedure for carded blisters to package five different vitamin products—requiring four different-shaped blisters.

By this method, White Shield (drug distributor with 730 outlets and estimated sales of \$1 million by the end of 1961) is getting a variety of different blisters for the price of one mold (about \$700) instead of spending several times that much for five different multiple molds. And because of the removable cavities, it is possible, with a minimum of cost for new cavities and change-over time, to vary the shapes of the blisters in accordance with production demands simply by changing one or more of the sectional cavities. Furthermore, as all blisters are made in uniform-sized rectangular frames, the

same sealing die can be used for all five packages.

White Shield adopted blister packaging when it started merchandising health and beauty aids in supermarkets with what it calls its "drugmobile," which is billed as a miniature, fully stocked, self-service drug store on wheels.

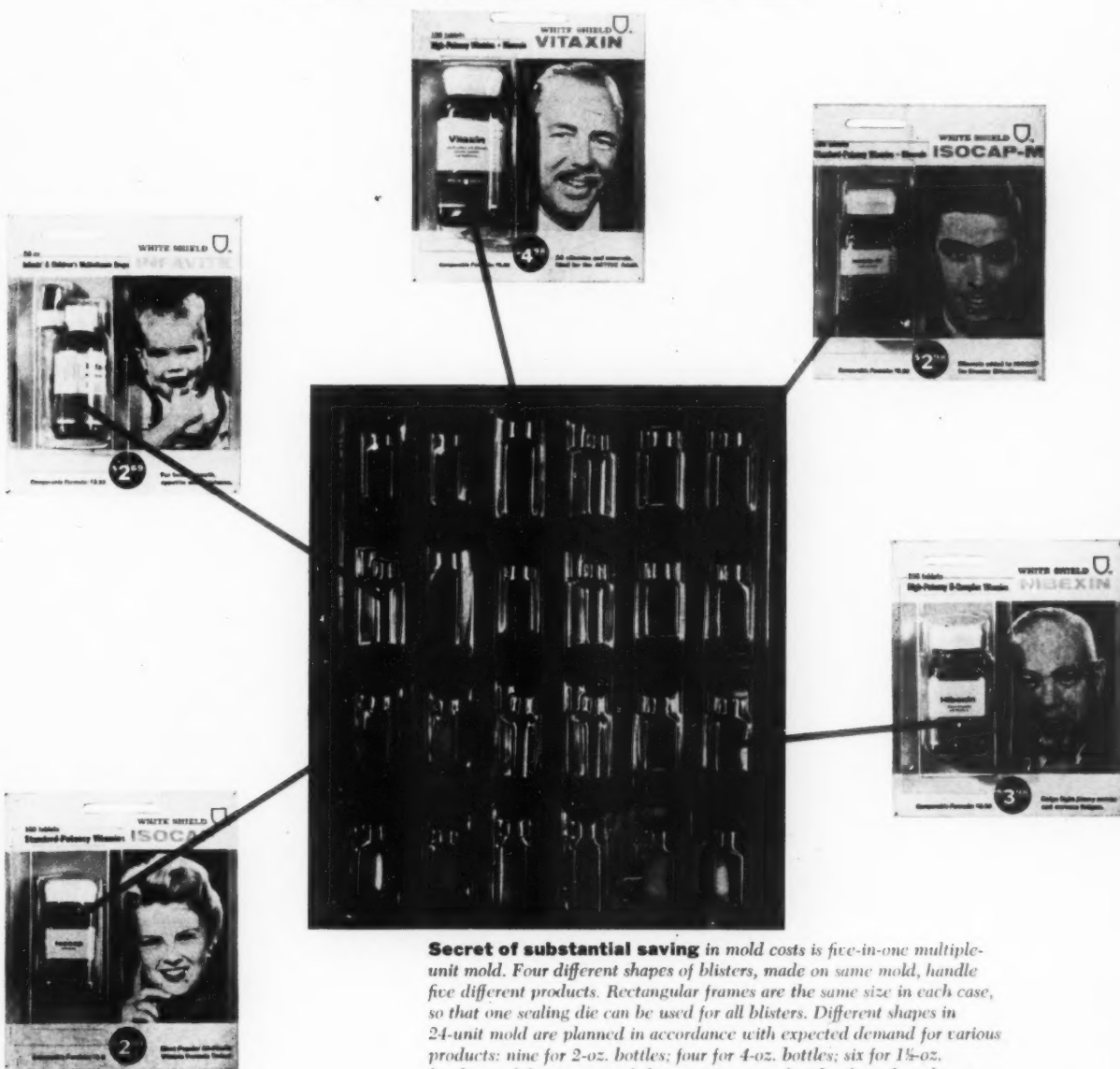
The two-year-old firm, which aims to be "the Rexall of the supermarkets," started out merchandising health and beauty aids through department stores. But it soon found, when it entered the supermarket field, that packaging suitable for outlets where there is a salesgirl for each product was not applicable to supermarkets. The package had to substitute for sales personnel.

Accordingly, for the vitamin line and other products, large illustrated cards with printed product information were deemed necessary for rack hanging, with thermoformed blisters to hold and display the products on the cards. But blister packaging of bottled items would add to costs and the young company had to watch its pennies.

In cooperation with the contract packager who handles the packaging for the vitamin line, a system

for two different products. Four cavities turn out blisters for 4-oz. bottles; six cavities turn out blisters for 1½-oz. bottles and five cavities turn out a special shape to hold bottle and [Continued on page 200]

Five different packages from a single mold



Secret of substantial saving in mold costs is five-in-one multiple-unit mold. Four different shapes of blisters, made on same mold, handle five different products. Rectangular frames are the same size in each case, so that one sealing die can be used for all blisters. Different shapes in 24-unit mold are planned in accordance with expected demand for various products: nine for 2-oz. bottles; four for 4-oz. bottles; six for 1½-oz. bottles, and five for special shape to accommodate bottle and applicator for a children's liquid vitamin product. The removable cavities permit changing shapes of blisters as production demands.



Viking Cutlery boxes for Ontario Knife Co.; designer, Richard Schiffer; art director, Michael Lax; supplier, F. M. Howell Co.

"Set-up boxes to provide inexpensive gift package for cutlery sets. Boxes were designed for stacking together to make point-of-sale displays—one of purposes of bold design treatment and three different-colored boxes."

Designers' summaries of the problems

To aid AIGA's jury, 50-word descriptions providing marketing and design development information were required with each entry. These explanations, briefed here to accompany the packages illustrated, indicate points taken into consideration in evaluating entries "in their totality for sale and use."

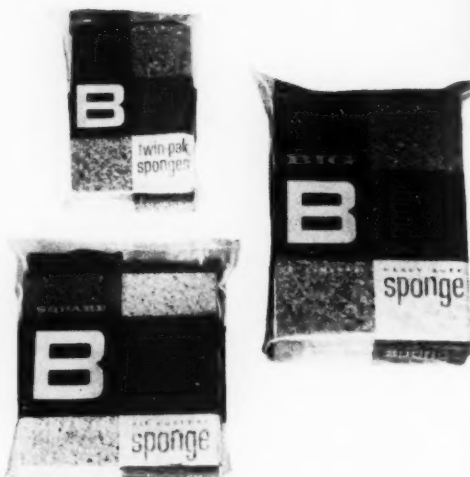


Hap Parakeet Seed economy package for Hap Pet Foods Co.; designer, Vance Jonson; photographer, Joe Maddocks; suppliers, Trojan Press, Cleveland Container Co., Western Lithograph Co.

"Marketing objective was to create an auxiliary Hap package to compete in lower-price range. Design was limited to two colors. Photographic illustration ties in with family design and Hap shield maintains identity with other Hap pet foods. Rubber stamp informs of special value."

Audax Tonearm box for Rek-O-Kut Co., Inc.; designer, Richard Schiffer of George Nelson & Co., Inc.; art director, Ronald Beckman; suppliers, W. W. Fitzhugh Co. and Interstate Container Corp.

"First package in a redesign program. Existing symbol was used, but with a new look for an inexpensive product by the use of red, gold and white on black, with illustrations of product in both assembled and knocked-down kit form."



Burgess sponge packages (printed polyethylene) for Burgess Cellulose Co.; designer, Hal Hester of Dave Chapman, Inc.; supplier, The Dobeckmun Co.

"Supermarket sponge line is given a new, coordinated graphic treatment. Emphasis is on brand image (large B prominently displayed). Polyethylene is printed in two colors of transparent inks plus opaque white for a calico 'feminine' appeal."

GRAPHICS

Flint Cook & Serve Tool sets for Ekco Products Co.; designer/art director, Don Smith of Latham, Tyler, Jensen; photographer, Ralph Cowan; supplier, F. M. Howell Co.

"The boxes embody the 'gourmet look' to promote new decorated tool handles. Photographic cover increases the promotional value of the box, makes it an attractive gift package."



Packaging exhibition at the American Institute of Graphic Arts indicates a trend toward more sophisticated design, in tune with the times, that is reaching even to the lowest-priced products

The challenge of high-level aesthetics in contemporary design with which today's packagers must compete is brought into sharp focus at the "AIGA Packaging 1960" exhibition of the American Institute of Graphic Arts, which is scheduled to run throughout the month of October at the institute's headquarters, 5 E. 40th St., New York.

This show, open daily from 10 to 5, (Monday-Friday) is not a contest. Rather, according to AIGA, the collection of more than 200 packages from 100 companies (many of them previously illustrated in MODERN PACKAGING) was chosen from 800 entries to be a record of this year's most noteworthy work concerned with graphic techniques in packaging as

a contemporary means to visual communication.

As such, it deserves some close attention. The selections, some of which are reproduced with this article, show that package graphics can no longer be left to the inept or routine commercial artist. Visitors cannot fail to be impressed with:

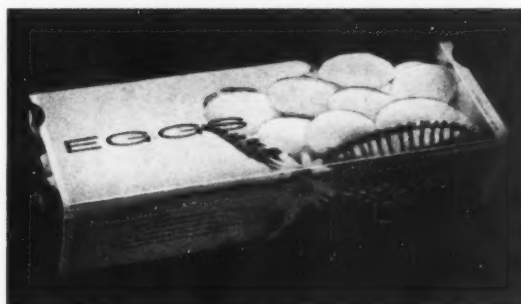
- The seemingly concerted effort being made to create graphic design that gives more pleasing shelf impressions without resort to the garish devices of screaming bulls' eyes, cluttered arrangements and harsh colors often regarded in the past as necessary elements for stand-out packaging.
- The almost universal objective of design upgrading to cater to the more sophisticated tastes of to-

1960



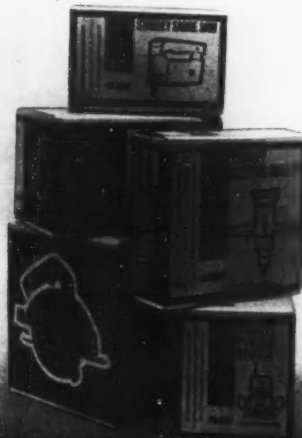
Radiant White and Colored Chalk cartons for Art Crayon Co., Inc.; designer, Ben Rosen and Irv Koons; supplier, National Printing & Folding Carton Corp.

"High styling for a low-end product was client's aim. White sticks suggest white chalk; colored sticks, colored chulks. Format helps establish identity with a motif that illustrates product."



Stock egg carton made by KVP Sutherland Paper Co., Sutherland Div.; designer/art director, Roy H. Johnson of Sutherland Graphic Arts Dept.

"In a product area hitherto lacking in color and in product appeal, this stock carton was designed to achieve a high level of product appeal, impulse and quality."



Electric-tool cartons for Stanley Electric Tools; designers, Lester Beall and Richard Rogers; suppliers, James H. Mathews & Co. and Hinde & Dauch Div., West Virginia Pulp & Paper Co.

"Selected cartons from a group of 40 different redesigned display packages and shipping containers. Problem was to develop a strong yet flexible family resemblance to overcome confusion among different sizes, shapes and uses."

day's consumers—a trend which is certainly apparent in almost all areas of modern industrial design beyond the field of packaging.

- The application of sophisticated design principles to packaging for popular-priced items as well as for expensive prestige items, where the trend began. Examples to be seen are the packages for Hap Parakeet Seed and Art Crayon Co.
- The most skillful and subtle treatments to dramatize such prosaic products as foam-rubber sponges or veterinary medications.
- The contribution that is being made by today's graphic arts industries in reproducing good design faithfully on almost any package material surface.

Significant, perhaps, is the relatively large number of packages in the show for drugs and toiletries, hardware, chemicals and electrical devices in contrast to the relatively few for foods. This leads one to wonder if the food field may be lagging in the trend to newer visual techniques.

Many of the packages deserve study, too, for their tasteful arrangements and greater legibility of informational copy, for their more careful selection of type faces, as well as for their judicious use of different colors for emphasis.

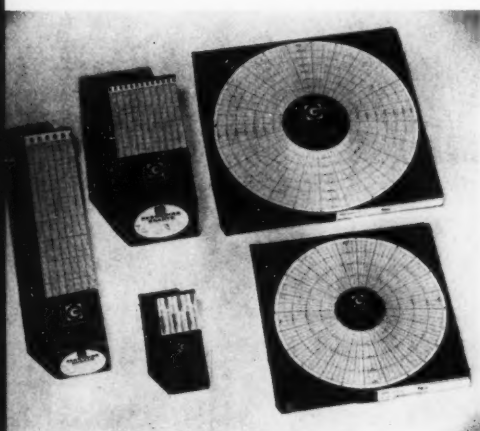
A healthy sign also may be the number of new designers—both independent and those who are

members of established design firms—whose work has been accorded a place in this exhibition. This emphasizes the growing interest of packagers in new approaches and fresh ideas.

AIGA Packaging 1960 is the institute's third venture into packaging. And it was the aim, according to Karl Fink, president of the Package Designers Council and non-voting chairman of the jury, "to evaluate the entries in their totality as items for sale and use, taking into consideration the dictionary definition of a package, plus full knowledge of their present-day marketing roles."

One of the requirements of this year's entries was a 50-word summary providing pertinent marketing and design development information to aid the jurors in each project. These summaries have been used as the basis for the captions used with the photographs illustrated on these pages.

Voting members of the jury included designers Francis E. Blod, Donald Deskey, Roy Larsen (vice president of Raymond Loewy Associates), George Nelson; Leo Burnett (chairman of Leo Burnett Co.), Jay Doblin (director, Institute of Design, Illinois Institute of Technology), Ralph Eckerstrom (director, Dept. of Design, Advertising & Public Relations, Container Corp. of America) and William Prout (merchandising manager, Lever Bros. Co.).

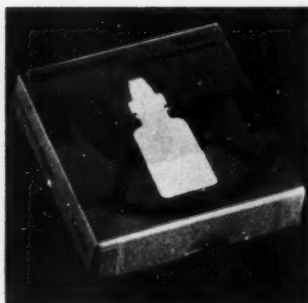


Graphic Controls Recording Charts packages for Graphic Controls Corp.; designers, Robert Ziedman, Donald Pahl and Harry Sooy, all of Robert Ziedman Associates, Inc.; supplier, Cooper Paper Box Div. of Graphic Controls Corp.

"Program was undertaken to integrate nine subsidiary companies under one symbol and common packaging. Packages for printed charts and forms for automation were designed to project image of accuracy and precision. Graphics relate to the type of chart contained in each carton."

Cans for Baldwin Oils & Commodities, Inc.; designer, Don Blauweiss; supplier, Bushwick Can Co.

"Redesign to unify nine products under one company. A corporate symbol was created for all the packaging. Color coding was used in each case for product identification."



Madribon Drops Roche box for Hoffman-La Roche, Ltd.; designer, Rolf Harder; art director, H. P. Decker; suppliers, Bourguignon Printing, Ltd., and Standard Paper Box Mfrs., Ltd.

"Required was a physician's sample for children's drops, printed in two colors. Design indicates content (plastic bottle) and appropriate symbol for children's product. Cover of the leaflet which is attached to the box carries same symbol."



Clear visibility, adequate stiffness for machine wrapping, yet a "soft" feel to the hand are Ward's reasons for adopting polypropylene film. Conventional paper band and end labels are used. First to achieve a sizable commercial packaging use of the new film, Ward now wraps 10,000 loaves a day of two brands in three areas.

The first polypropylene wrap

*Long-anticipated new packaging film makes its commercial debut
as a wrap for Ward Baking Co. bread loaves*

The first reported commercial packaging application of polypropylene film—a new polyolefin plastic in which large chemical companies have invested millions in the belief that it has a packaging potential as big as polyethylene or cellophane—is its adoption by Ward Baking Co., New York, as a bread wrap in three marketing areas.

Applied by Ward to part of its production of Tip Top loaves in the Baltimore and Chicago markets and to a new "Mr. Big" loaf in the New York market, this new transparent film is said to provide a wrap with extra clarity and increased water-vapor protection for these outsized bakery products.

Significant to Ward is the fact that this film, in 1-mil thickness, is stiff enough for good machine handling, yet still retains the soft feel that is con-

sidered important in merchandising white bread. It is this combination of properties that has led Ward to adopt the film, plus the fact that the initial price of \$6.45 per thousand loaves (2.25 cents per 1,000 sq. ft. for a standard 16-by-18-in. sheet) is competitive with 1-mil medium-density polyethylene. Volume film production, Ward officials believe, will eventually reduce this price much further.

The bread application, big as it may become, is regarded as only part of the picture by Ward, which plans to apply polypropylene wraps to sweet bakery goods, too, where the film's outstanding grease resistance can be used to advantage.

Bread wrapping, now a [Continued on page 206]

SUPPLIES AND SERVICES: Polypropylene film by AviSun Corp., Post Rd., Marcus Hook, Pa.



18th-century elegance

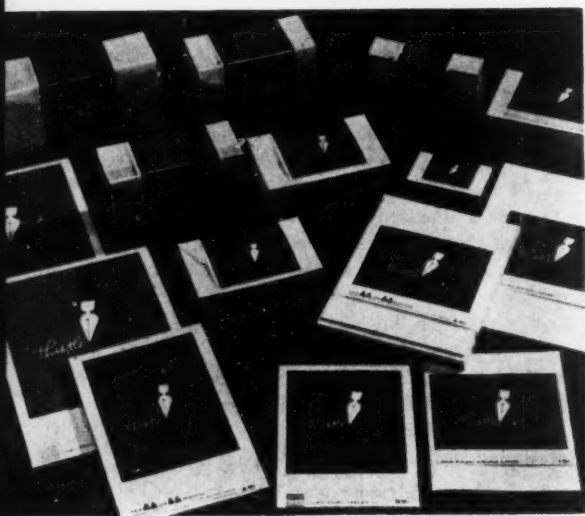
Among the most closely watched gift packaging in the cosmetic trade this fall will be the collection of Christmas set boxes by Coty, long the acknowledged leader in cosmetic and fragrance gift sets.

The Coty boxes—22 different combinations—represent a radical departure from contemporary design concepts that appears to be taking place in many areas. Like the box in the photo, all are covered with box wraps printed with black and white reproductions of famous 18th-century Fragonard and Boucher steel engravings, reminiscent of the ornate elegance of the court of Marie Antoinette.

They could well start a trend away from the starkness of the modern. All the reproductions are made from line cuts printed on high-gloss coated stock. The same illustrations are used outside and inside the double-shell box covers so that the engravings are seen whether the boxes are open or closed. Bases are covered with embossed, gold-colored foil. Blow-ups of the engravings used in box design also provide the retailer with dramatic display tie-ins. *Design by Eric de Kolb, 20 E. 53 St., New York. Box wraps by The House of Harley, Inc., 15 E. 40 St., New York 16.*

IDEAS

New design upgrades variety-store stationery line



Distinctive new surface design that unites a broad array of products into a colorful and quickly identifiable family is used by Butler Bros., Chicago, to upgrade the sales appeal of popular-priced social stationery. The company markets Thistle brand envelopes, cards and writing paper (in various sizes and colors) through some 2,200 variety stores operated by its Ben Franklin Division.

The new design appears on all cartons, boxes and paper-sleeve wraps for the packager's Thistle line of stationery. It also has been adapted to the paperboard covers of writing tablets, to identify these non-packaged items with the line. Over-all label background is a broad expanse of emerald green. The dominant design element on all package forms is an illustration of a pen in two shades of blue. The pen's white-colored point is aimed at an abstract suggestion of a thistle, which is also printed in blue. Minimal label copy flanking the illustration simply identifies the brand name and the product. An additional element of family identity is afforded by Butler's new logo, a stylized double-B, which appears on all labeling. *Design by Morton Goldsholl Design Associates, 201 N. Wells St., Chicago 6.*

Instant-coffee 'carafe' projects subtle quality appeal

Fitting the package to the product, Butter-Nut Foods Co. has introduced instant coffee in a glass jar that looks like a coffee carafe. So enthusiastic has been consumer response to the unusual new container (attractive enough to go right to the table), says this Omaha-based packager, that it plans to register the design as its trademark.

Worth attention by packagers in many product fields are the shrewdly calculated merchandising values inherent in Butter-Nut's new coffee container. The re-usable jar's graceful and distinctive shape not only makes it a stand-out among competitors on the shelf, but it also projects a subtle suggestion of extra product quality. The quality appeal is further enhanced by a small, medallion-shaped jar label that marks a sharp break with the tradition of "hard-sell" wrap-around paper labels used by most instant-coffee packagers. The label, which also appears on the container's metal lug cap, gets the product story across in just six words. A more detailed label is on the jar's reverse side. *Container design by Gould & Associates, 306 N. Doheny, Los Angeles 48. Glass jar and metal lug cap by Owens-Illinois, Toledo 1, O. Paper labels by H. S. Crocker Co., San Bruno, Calif.*



IN ACTION

Handy foam-plastic applicator

Unusual feature of a shoe-shine kit just introduced by Shoe-Sheen Products Corp., New York, is the convenience of the squeeze-to-use tubes for the cream polish, which are equipped with urethane-foam applicators. The principle of this construction, which does away with the messiness of shoe shining (no fingers touch the product or shoe), should find other applications for ointments and cosmetics.

The foamed plastic, permanently fused to the polyethylene tube, is made with a center hole for dispensing. When squeezed, the foamed plastic acts as a sponge. The specially engineered tube made by Shoe-Sheen is thicker at the top, for more convenient handling even though polish may be nearly used up. Green transparent polystyrene screw caps are made with center pin that fits into the applicator aperture to prevent leaking. Product information is printed by silk screen. The tubes are marketed with a two-faced buffing mitt in a copper-toned polystyrene box with metal hinge. *Tubes made of Union Carbide polyethylene and Napco Chemical's urethane foam. Box by Neelak Products, Montreal, Canada, using Monsanto polystyrene. Contract packaging by Old Empire, Inc., 865 Mt. Prospect Ave., Newark.*



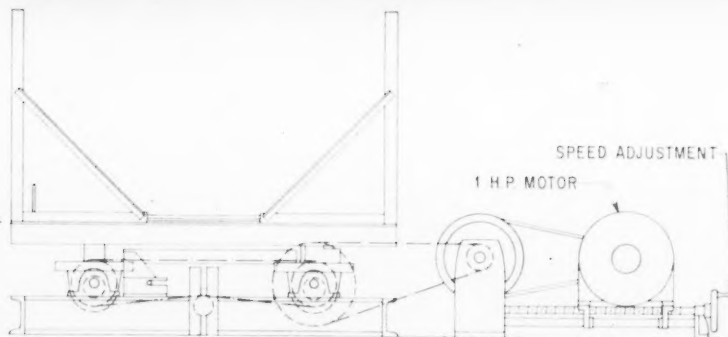
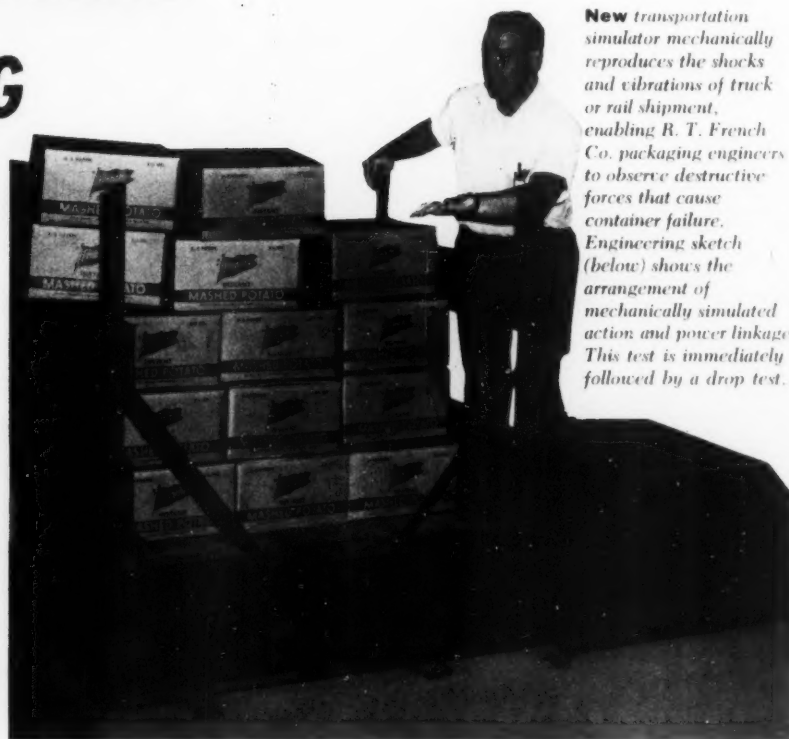
*At an in-plant laboratory that
saves R. T. French \$4,400 a year
in trial-shipment costs,
new food containers undergo bumps of
transcontinental travel in just one hour*

INSTANT PACKAGE TESTING

In a rigorous package-testing program adopted by the R. T. French Co., Rochester-based marketer of foods and condiments, new containers are subjected to the stresses of transcontinental truck or rail shipment in only 60 minutes—without ever leaving the plant. Over-all, the program is reported to save the company an estimated \$4,400 a year in trial-shipment costs. Of broader significance, it gives the packager a valuable additional tool for the development of new packaging that blends maximum economy with maximum effectiveness.

Especially in view of the variety and complexity of flexible packaging materials now available, this in-plant testing procedure to guard against container failure in shipment may serve as a model for other

New transportation simulator mechanically reproduces the shocks and vibrations of truck or rail shipment, enabling R. T. French Co. packaging engineers to observe destructive forces that cause container failure. Engineering sketch (below) shows the arrangement of mechanically simulated action and power linkage. This test is immediately followed by a drop test.



manufacturers of products that require stringent in-package protection up to moment of use.

The story begins with French's decision several years ago to broaden its consumer line to include pouch-packaged instant potato products. Because prolonged exposure to air will affect the flavor and quality of such products, packaging that insures airtight protection from the time of filling to the time of opening was a critical requirement. Basic product protection is achieved in the plant by performing pouch-filling and sealing operations in an enclosed glass case from which all air has been removed and nitrogen substituted. Filled pouches are loaded two to a carton; cartons then are case packed for shipment throughout the country.

Under normal conditions, says French, the potato granules in their pure nitrogen atmosphere will remain fresh and palatable for indefinite periods. But extreme transportation vibrations and other handling damage might rupture the pouches, permitting nitrogen to escape and thereby making the product subject to deteriorative changes.

Because of the existence of this sales-killing potential of container damage, French sought a testing program that would iron out packaging difficulties before the product was placed on the market. The first such experiment was trial shipment of truckloads of case-packed instant potatoes as far as the West Coast. It was costly and time consuming. A test trip even to Chicago and back took two weeks.

But such a test method's biggest drawback, report French's packaging engineers, was lack of control. Because of variances in truck-loading patterns, in driving speeds and in travel routes, the tests never produced the same results twice. Moreover, the nature of the test prohibited observation of the package under destructive forces at the moment of failure. Due to this lack of test control, French ultimately found, *overpackaging* resulted—a factor which in the highly competitive food industry might be as costly as product damage.

At this point, the company became convinced that the only workable way to test packages before placing them on the market was to install a fully equipped in-plant testing laboratory. Out of experiments conducted in the laboratory, French evolved the protective pouch it now uses for instant-potato products. The pouch walls for instant mashed potatoes are a four-layer lamination of polyethylene and aluminum foil. Printed on the outside with recipe copy, the packages are reported to stand up to rough handling without nitrogen leakage and to keep their contents fresh for indeterminate shelf-storage periods. For oven-ready scalloped potatoes, the company's latest product, pouch walls are a waxed lamination of glassine and foil.



Result of rigorous in-plant testing program says French, is packaging that combines maximum protection and economy. Pouches for instant mashed potatoes, which require protection against effects of air until package opening, are formed from a four-layer lamination of polyethylene and foil.

Among the equipment in French's testing laboratory is a compact mechanical transportation simulator. It is designed to reproduce in minutes all the jars, vibrations, shocks and acceleration normally encountered in cross-country truck or rail shipment. The variable-speed machine is of open construction, to allow first-hand observation of container failure. Adjustable rails enable the packager to stack shipping cartons as they would be in actual shipment.

To measure the effect of impact force that occurs when a truck or railroad car stops suddenly, the transportation-simulator test is followed immediately by a drop test. French points out that these tests are always conducted successively because, in actual shipment, vibrations have a deteriorating effect on packaging materials that increases the risk of container damage through sudden shock.

Other procedures used regularly by the company as part of its quality-control packaging program are moisture and strength tests and pressure tests to check pouches for leakage. Every five minutes, a filled pouch is removed from the line and pressure tested to check seal integrity.

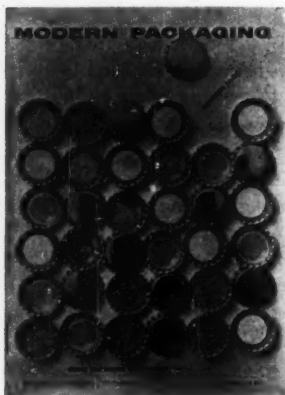
French reports that full-scale, in-plant package testing is a continuous procedure. Its aims are not only to assure the efficiency of present container forms, but also to develop new and improved packages for potatoes and for other products.

SUPPLIES AND SERVICES: Mechanical transportation simulator by L. A. B. Corp., Skaneateles, N.Y.

THE CROWN CAP

The bottle closure for beer and beverages, which used 46 1/2 billion last year, came after years of frustrating experiment with other pressure-holding devices—and costs less today than it did 70 years ago

GREAT PACKAGING DISCOVERIES—19



THIS MONTH'S COVER

Today, thanks to one man's idea, no bottler of carbonated beverages or beers is faced with the dilemma of his 1890 counterpart, who had to wrestle with at least 10 different types of closures that ranged from internal balls and flat, circular "valves" to cork and wood plugs and external "swing" caps with fancy wire levers. All were claimed to retain pressurized carbon dioxide gas in a product, yet none was truly effective from the standpoint of cost or efficiency.

Into this situation stepped William Painter, an inventive genius whose experience was primarily in the manufacture of patent leather and who didn't turn his attention to packaging until he was almost 50 years old. But his ultimate inventions—the crown cap and the machinery for applying this simple closure to bottles—revolutionized the bottling of all carbonated drinks because of the cap's simplicity, economy and ease of decoration. Within 30 years it replaced every other type of closure in its field and is given at least part of the credit for the mighty growth of bottled beers and beverages, which together last year used 46 1/2 billion crown caps.

It is worth noting that even so simple a device as the crown cap did not come as a single brilliant idea. Painter, starting work on the problem in 1884, added two more to the long list of ineffective bottle closures before he arrived at the crown. But the second of his ideas came close to the goal. It was a disk of rubber with a convex bottom surface that fitted into a special groove inside the lip of the bottle and was held in place by internal pressure. This was the first closure that was inexpensive enough to be used once and be thrown away.

But Painter, aware that his "Bottle Seal" had certain drawbacks, continued his search for the ultimate throw-away closure. As early as 1889 he experimented with a metal cap with deep crimps that locked over a molded ring in the top of the bottle and with an inner, solid-cork disk seal to prevent the escape of gas. It was the first closure that could be effectively decorated for extra merchandising impact. With a loop stamped in its top surface to facilitate opening, this cap naturally suggested the name "Crown," a title so appropriate that it eventually became generic. Painter turned his whole attention to the perfection of this low-cost cap.

The first crown cap exaggerated the difficulties of securing a perfect seal. The skirt was extra long and too deeply crimped and the cork disk inside was unnecessarily thick. Also, the loop in the top permitted leakage through the cork liner. Therefore, in 1890, Painter eliminated the loop, shortened the cap skirt and further facilitated removal of the cap by flaring the bottom of the skirt. This was the first crown cap as we now know it. By 1891, improvements in sealing



enabled him to reduce the thickness of the cork and to change the angular lip on the bottle to the rounded form that has prevailed ever since. With these improvements, leakage problems were solved and the crown cap was formally launched with the formation of the Crown Cork & Seal Co., which succeeded The Bottle Seal Co. in 1892. In the same year, Painter acquired patents on all modifications of his crown cap and on the machine to apply them.

At first, the new firm had rough going because the spring, swing and loop-seal closures were still in vogue. In fact, even in 1904 manufacturers of the loop seal were claiming an annual volume of 200 million units. But steady gains were made by the new crown closure—boosted by the development of a simple wire bottle opener cheap enough to be given away—and Painter saw his crown cap well established before his death in 1906.

Progress was further advanced a few years later by another development—the composition cork seal. In the earliest crown caps, the inner seals were cut from solid cork and were comparatively expensive. Then, in 1912, Charles E. McManus, another inventor, devised a process for bonding ground cork particles into satisfactory thin disks and founded the New Process Cork Co. in New York to sell this product to makers of crown caps (who sprang up after the original Painter patents ran out in 1909). This firm was later merged with Crown Cork & Seal, which McManus headed for many years.

This less expensive seal was the one improvement needed to complete the transition of the bottling industry to the crown cap. The change-over was enhanced by the formal approval of a crown-finish bottle in 1923 by the then Glass Container Assn. of America.

Since that time, several improvements have increased the efficiency and economy of the crown cap. Spot crowns, containing protective inner patches of paper, aluminum foil or vinyl, were introduced in the late 1920s to preserve the flavor of such delicate beverages as beer, ginger ale and orange soda. The shallow shell with a shorter skirt and thinner liner was introduced for greater economy in the 1950s. This cap also is used as the base for special new plastic linings, which are spun or molded into the shell. Replacing cork, this new gasket is now increasingly used for delicate products.

In a period of constantly rising prices, the crown cap has made one other contribution to packaging that is particularly notable. Painter's decorated crown caps were sold for 38 cents per gross. Today, a big-volume glass packager can obtain them for only 25 cents a gross—a fine tribute to the constantly improving technology that has made this packaging discovery a great one.

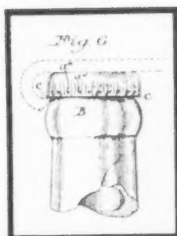
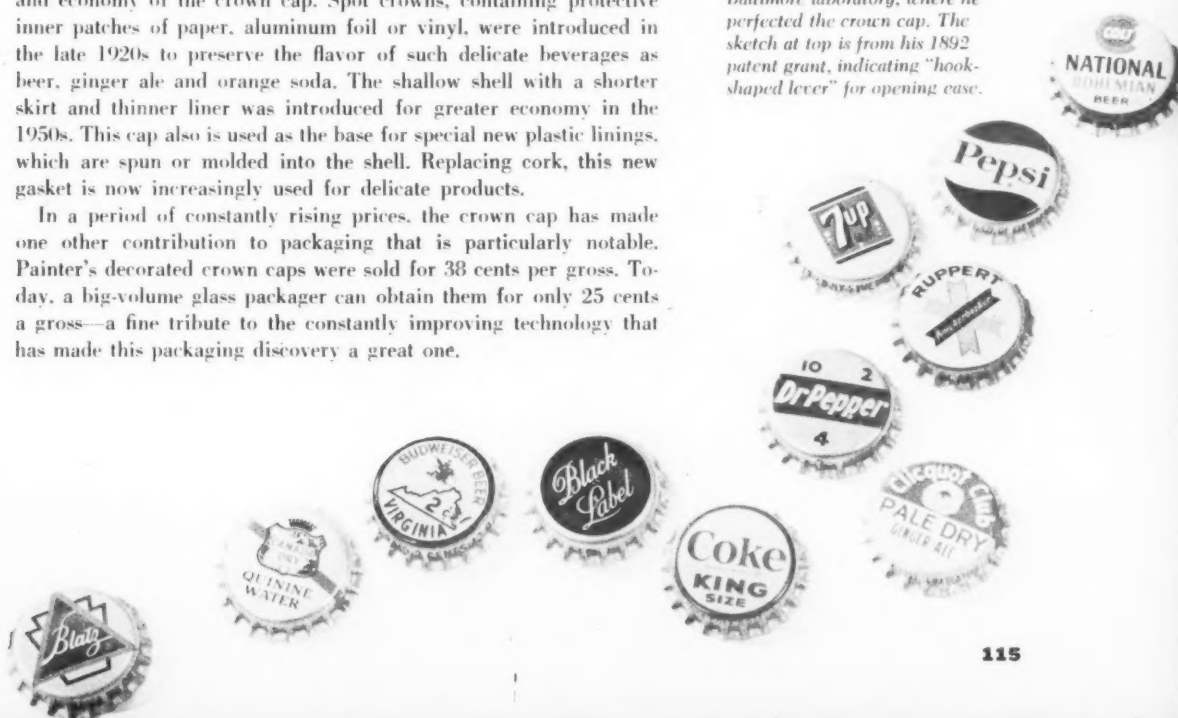
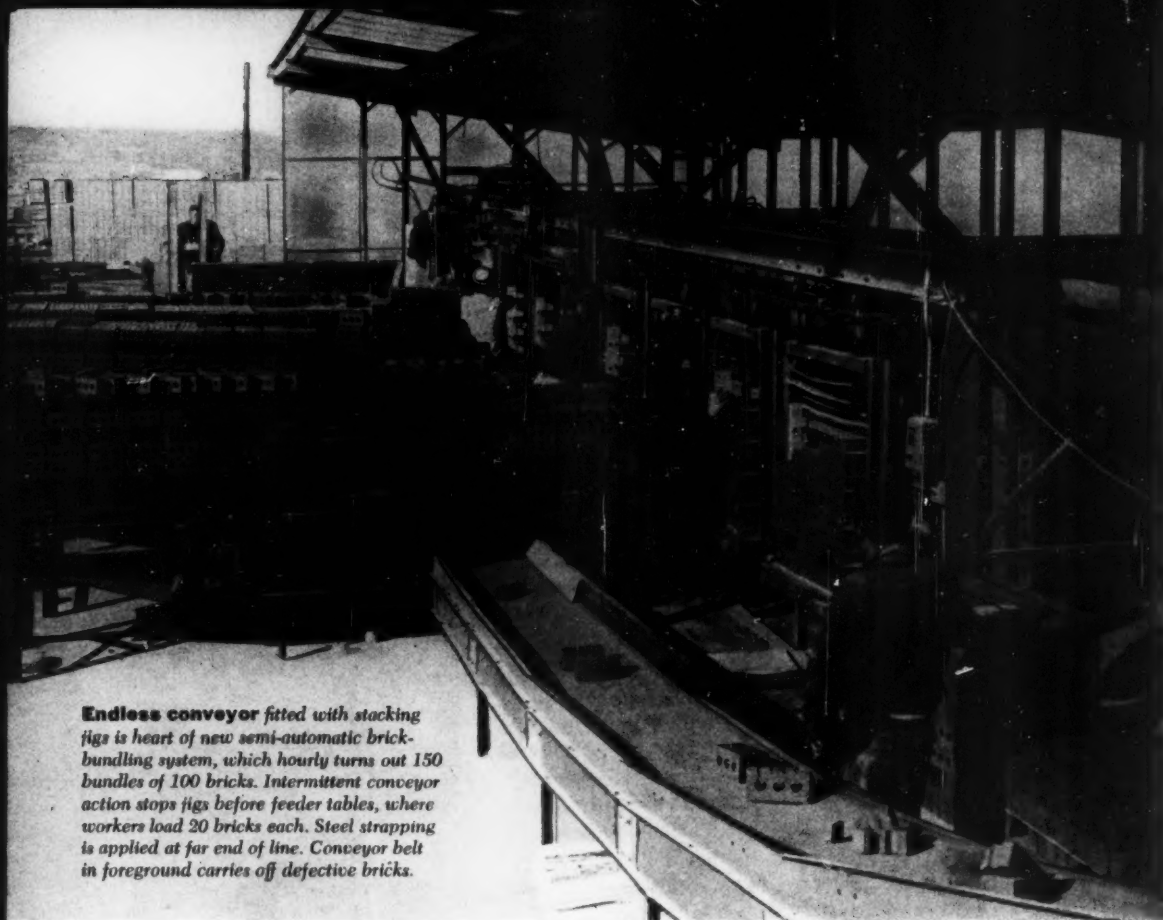


PHOTO COURTESY CROWN CORK & SEAL CO.

Inventor William Painter pictured in 1890 in his Baltimore laboratory, where he perfected the crown cap. The sketch at top is from his 1892 patent grant, indicating "hook-shaped lever" for opening ease.





Endless conveyor fitted with stacking figs is heart of new semi-automatic brick-bundling system, which hourly turns out 150 bundles of 100 bricks. Intermittent conveyor action stops figs before feeder tables, where workers load 20 bricks each. Steel strapping is applied at far end of line. Conveyor belt in foreground carries off defective bricks.

Brick packaging mechanized

Former manual operation goes semi-automatic via a machine team that cuts Robinson Brick's labor costs 30%, solves breakage and color-blending problems, builds new user appeal

Stimulated by an upturn in product demand and in production and handling costs, the building-brick industry—a field long fettered by the limitations of hand labor—turns to mechanized packaging. It is a significant development that illustrates again the increased flexibility which machinery suppliers today are incorporating into much of their new equipment to extend the cost-saving benefits of mechanization to greater numbers of consumer as well as industrial packagers.

Among several companies which recently have adopted a new semi-automatic system for improved

handling and bundling of bricks is the Robinson Brick & Tile Co. This Denver-headquartered firm (250 employees, \$3,000,000 gross) reports that the system, which replaces an almost entirely manual operation, has cut its labor costs by 30%, reduced brick breakage by half and solved a former problem of accurate color blending. Equally important, says the company, is that it has introduced new economy and efficiency into the operations of both dealer and contractor customers.

A particularly noteworthy achievement of the mechanical packaging equipment is the reduction

of manual handling of bricks to just two times—once when they are stacked in bundle-forming jigs; the other when they come into the bricklayer's hands. Formerly, Robinson notes, bricks were handled as many as 10 times from kiln to wall, entailing excessive labor cost and product damage.

Robinson's new mechanized brick-bundling program is worth study by other packagers seeking a convenient, economical method for unitizing sturdy items which must be conveyed in large quantities to the point of use. The system could be adapted to multiple-unit packaging of tiles, blocks, shingles, boxed articles and many other regular-shaped items.

Semi-automatic brick bundling at Robinson's plant is accomplished on a huge accumulating and strapping line developed jointly by two equipment-supply companies. It consists basically of a hydraulically driven, straight-sided, endless conveyor unit which is fitted with vertically mounted stacking jigs. The manually loaded jigs, which hang from an overhead conveyor chain, are serviced by six power-driven feeder tables.

The system is completed by a steel-strapping station positioned at one end of the elongated-oval conveyor line. Located out of doors, this operation is reported to be capable of an hourly output of 150 steel-strapped bundles of 100 bricks. Cycling speed of the conveyor line can readily be regulated to meet varying production requirements.

The packaging operation begins with fork-truck delivery of kiln cubes of 400 to 500 bricks to each of the feeder tables. At machine start-up, intermittent conveyor action brings a stacking jig to a full stop at each work table, where the worker sets about 20 bricks into the jig before it cycles to the next station. Thus, a full pack of 100 bricks is completed at the fifth station. The 100-brick pack consists of 13 rows of bricks, each stacked eight high. (Four bricks are left out when the package is being formed, in order to accommodate fork-lift prongs.) During the stacking operation, any imperfect bricks are rejected onto a conveyor belt which passes beneath the feeder tables.

Prior to strapping, bricks are ejected in stacked form from the fully loaded jig by an automatic power ram, after which the bundle is compressed to assure a tight "package." The empty jig continues its journey by chain belt to the beginning of a new packaging cycle.

At the steel-strapping station, three 100-packs of bricks are consolidated [Continued on page 232]

SUPPLIES AND SERVICES: Semi-automatic brick-packaging system by Link-Belt Co., Prudential Plaza, Chicago 1, using steel strapping, strapping equipment and powered feed track by Acme Steel Products Div., Acme Steel Co., 135 St. & Perry Ave., Chicago 27.



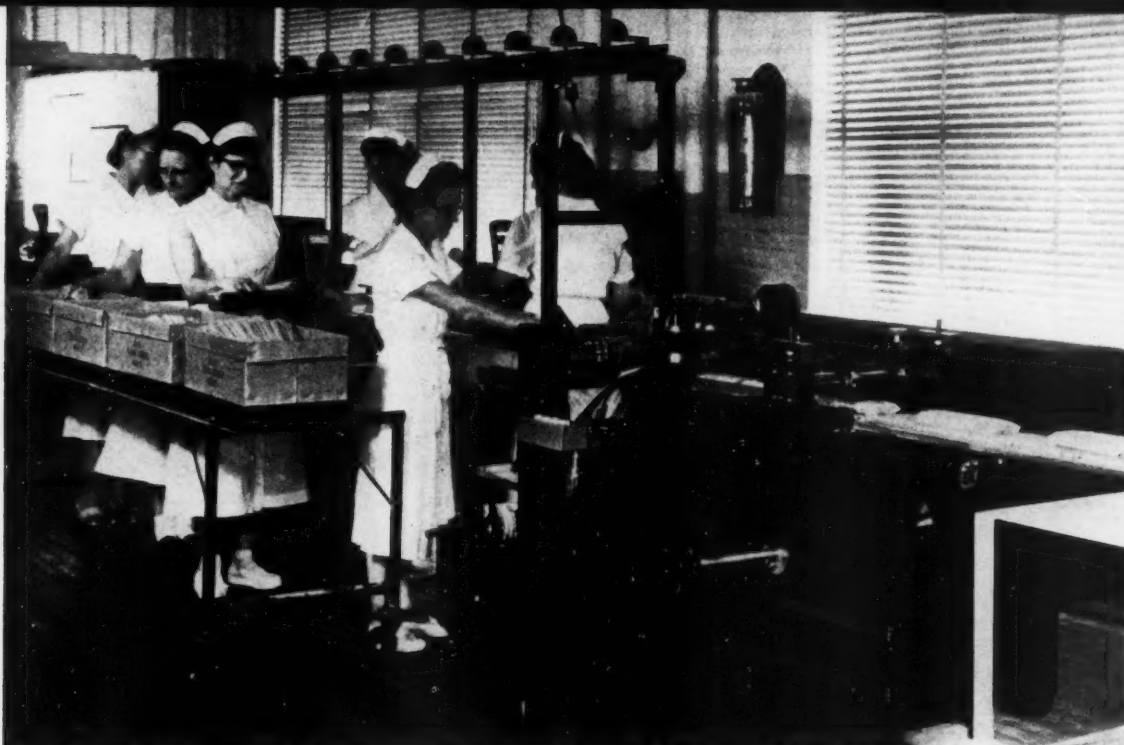
Manual loading of jigs is only hand operation required. New system enables workers to blend brick colors more uniformly than was possible under former all-manual bundling procedures, says Robinson.



At strapping station, stacked bricks are joined into three-bundle units after automatic ejection from jigs. Paperboard corner strips, automatically fed and positioned, unitize bundles, protect bricks against chip damage. Uniformly tensioned steel strapping is secured tightly around each bundle.



Ease of handling bundled bricks is indicated here, as fork truck delivers six 100-packs to storage area. Strapping bundles also save customer time in loading and unloading bricks, and in checking inventories.



Special adaptation of standard horizontal pouch-forming machine enables handling of slender and fragile macaroni and spaghetti. Chain-driven paddles (returning above operators' heads) descend at far end of frame and then push products through a rounded trough conveyor to film-forming and sealing section (center). Hand weighing by grouped operators may soon give way to automatic techniques.

New progress in pouching

Skinner's experience with hard-to-handle spaghetti and macaroni sticks shows that principle of horizontal form-fill-seal in film can be adapted to such a job with 135% more output and 47% less labor

The usefulness and versatility of horizontal pouch-forming machines are being markedly increased as mechanical engineers and production men discover how this type of unit can be applied to the packaging of awkwardly shaped solid items.*

New evidence that even relatively minor modifications can adapt such equipment to highly specific uses is seen in the conversion of one standard machine for the packaging of long, fragile lengths of spaghetti and macaroni in polyethylene-coated cellophane at the Skinner Mfg. Co., Omaha.

Every manual operation but weighing has now been automated for these "jack-straw-type" prod-

ucts for an output of 20,000 packages per 8-hr. day—a 135% increase in output and a 47% reduction in labor compared with previous semi-automatic packaging operations, according to H. Geddes Stanway, executive vice president of Skinner.

In explaining this packaging change, Mr. Stanway notes that macaroni products are customarily packaged in folding cartons in the East; in both flexible materials and cartons in the Middle West (about 50% each) and largely in flexible films in the Far West. Thus, mechanical packaging developments have been concentrated on the carton pack.

And so, while some progress has been made during the last few years in rapid, automatic flexible packaging of short-cut macaroni products, the

*See "Ultra-Fast Pouch Packager," MODERN PACKAGING, July, 1960, p. 96, and "Higher Speed with Polyethylene," MODERN PACKAGING, July, 1960, p. 111.



Pouch forming and sealing is shown in this close-up. Film feed was inverted to tie in with overhead pusher paddles (which prevent normal overhead film feed). Semi-circular paddle (upper center) slides products into film tube, then rises for return trip to start of machine. Conventional rotary heat sealers are at the right.

longer cuts have defied automation with good reason. Such specialty food items vary greatly in length (9 to 13 in.), in longitudinal curvature and in outside diameter (from 0.035 to 0.085 in. for spaghetti, 0.152 to 0.250 in. for long macaroni).

To accommodate such variables requires a machine with gentle, straight-line motion and simple, though flexible, mechanical action. The horizontal pouch machine was found to approximate most closely this ideal and, as a matter of fact, required relatively few changes to be made in its design, according to supplier engineers.

A special receiving conveyor was designed with a solid and conforming channel base to replace the standard slotted-base channel, which would have allowed product to fall through. With this new base conveyor, it was necessary to mount the product pusher paddles on an overhead chain instead of driving them through the slotted-base channel in the conventional manner.

With this conveying system, it was necessary to invert the film former—bringing the web in from the bottom of the ma- [Continued on page 208]

SUPPLIES AND SERVICES: Pouch form-fill-seal machine by FMC's Hudson-Sharp Machine Co., Green Bay, Wis. Polyethylene-coated cellophane by Color-Wrap Co., 4606 W. 21 St., Cicero, Ill.



Pouch pack with longitudinal seam on reverse side is created from tough polyethylene-coated cellophane that gives long shelf life and less package breakage. Film-packed macaroni products are marketed mostly in the West.

Holidays

are Pickle Days!

...and that means

Holidays are Twist-Off days, too

This year's Holiday Season promises to be a very good pickle season. Once again, the pickle packers are pushing their seasonal theme: "Holidays are Pickle Days"—and thousands of good retailers will be going along with it.

Merchandisers are realizing, more and more, that today's pickles are good sales builders. The modern offerings of pickles are so good, so attractive, and so varied that pickles have become one of the greatest impulse items. What's more, the tie-up of pick-

les with the holiday feasts has proved to be a "natural".

Package design has undoubtedly helped the cause along—and the extra convenience and clean, modern look of $\frac{1}{4}$ -turn Twist-Off Capped packages have added a considerable force by providing another bit of buying urge for the wonderful products that the pickle packers are offering.

May we suggest, then, that no Holiday feast is at its best without pickles—and that no pickle package is at its best without a Vapor-Vacuum Twist-Off Cap.

Twist-Off CAP

NEW Twist-Off CAP

"VAPOR-VACUUM" Seal and Re-Seal

WHITE CAP COMPANY

DIVISION OF CONTINENTAL CAN COMPANY

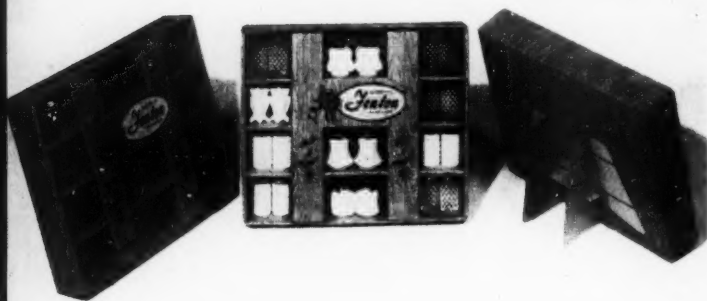
NEW "Twist-Off" CAP



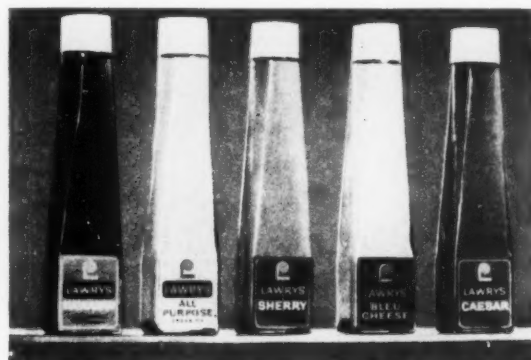
- 1 A new easel-backed corrugated display printed with a wood-grain background provides a rich setting for Fenton Art Glass Co.'s hand-made salt and pepper sets. The unit, delivered fully assembled, has 11 separate compartments for sets in various designs. Display, West Virginia Pulp & Paper's Hinde & Dauch Div., Sandusky, O.
- 2 Slender, square-based bottles in a contemporary design add distinction to Lawry's Foods' five varieties of salad dressings. Advantages cited for the new bottle, which is suitable for dining-table or buffet use, are: easy handling, easy pouring, convenience for storing. A large white urea cap with special liner completes the package. Design, Saul Bass, Los Angeles. Bottle, Ball Bros., Muncie, Ind. Caps, Wheeling Stamping Co., Wheeling, W. Va. Paper labels, Roto Litho Sales, Los Angeles.
- 3 Color codings and geometric symbols now identify bagged cement products, traditionally classified by number only. Number and color coding for each cement type appear in the designated symbol on face and gussets of Ideal Cement Co.'s new bags. Illustrated is one of the seven sets of symbols: Type 1, printed in black and red, designating

standard Portland cement. The new system is said to ease identification in warehouses and on job sites. Bag, Union Bag-Camp Paper, New York.

- 4 Display cartons resembling old-fashioned steamer trunks hold a dozen 8-oz. polyethylene bottles of Bonne Bell's Ten-O-Six lotion—a new product for vacationer and traveler. Made from a single piece of solid bleached sulphate clay-coated board, the five-color-printed, gloss-finish cartons have a simulated hinge cover. Carton, Continental Can's Box-board & Folding Carton Div., New York.
- 5 Success of Kimberly-Clark's automatically applied polyethylene wraps for twin-pack Kleenex paper towels has led to the selection of similar wraps for a new jumbo-size single-roll package. Soft texture of the 1½-mil film provides a natural tie-in for the product story, "Squeeze this package, feel its new softness," printed on the wrap. Film, Continental Can, New York, extruded from Union Carbide Plastics' polyethylene compounds. Wrapping machine, Package Machinery, East Longmeadow, Mass.
- 6 Private-mold glass bottles in pints and quarts, each with pinch waist for easy gripping, have been se-



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lected by Fels & Co. for new Fels-Naptha liquid detergent. Wrap-around paper labels are printed in green and red; metal screw caps are red. Bottles, Anchor Hocking Glass, Lancaster, O. Caps, Phoenix Metal Cap, Chicago. Labels, New Haven Board & Carton Co., New York.

- 7** Nested baking cups in new printed polyethylene bags are reported by Fluted Paper Products Co. to maintain the moisture content in the paper cups, thus eliminating possibility of their flaring when ready to be used. Easy reclosure keeps unused cups free from dust and dirt, and visibility of the cups through the film aids quality-control inspection. Die-cut paper header enables hang-up display of the Baker's Choice "Versatile 85" pack.

- 8** Aluminum cans are now used to package vegetable seeds. Seed Research Specialties, Inc., reports the adoption of aluminum because of its light weight—less than one-fourth that of the standard metal can. The seeds are artificially dried before packaging, then placed in the airtight container to prolong their life. Lithographed in four colors, the 1-lb.

can has an applied spot paper label picturing the seed variety. Can, Continental Can, New York.

- 9** Greater strength and maximum protection are provided by new, improved, custom-formed polyvinyl chloride packing trays used by Troy H. Cribb & Sons, volume growers of freestone peaches. The tray cavities are larger— $1\frac{1}{2}$ in. deeper than previously. A $\frac{1}{2}$ -in. trim-out on all four sides prevents fruit from touching the sides of the lug and bruising in transit. Panta-Pak tray, Pantasote Co.'s Panta-Pak Div., New York.
- 10** A lamination of oriented polyvinyl chloride film to fibreboard adds extra trippage and merchandising appeal to National Brewing's new returnable cases for Altes Lager Beer, according to simulated use tests conducted by American Bio-Chemical Laboratory's Industrial Testing Service Div. Tests indicated that this lamination was the most effective and economical of three under study. Case, River Raisin Paper, Monroe, Mich. Laminating with Reynolds Metals' Reynolon polyvinyl chloride film, Wilcox-Woolford, Spring City, Pa.

Using visual tester, executives of Happy Pet Products Co. rate three designs in the same order, arriving at a decision painlessly. Alf Nelson, carton supplier's art director and inventor of the instrument, is shown holding carton. Others, left to right: W. W. Finn, vice president and general manager of the carton company, discussing problem with Edward Lowe, president; Robert Follett, secretary-treasurer, Happy Pet.



PHOTO COURTESY CROWELL CARTON CO., ST. REGIS PAPER

THE EYES HAVE IT

As in the case of Tidy Cat, when the packaging committee fails to agree on subjective judgment, objective measurement with a visual-testing instrument may produce surprising unanimity

It happens too often in almost every company: Designs for a new package are narrowed down to two or three choices—but those responsible for the decision can't agree on the final selection. Valuable time is lost in getting the package to market.

It is at this point that the usefulness of today's visual-testing instruments—heretofore regarded somewhat skeptically by many designers and scientists—can be most clearly demonstrated.

Among such instruments are the various types of "light boxes" in which a viewer sees different package-design elements under controlled lighting and is asked to rate each of the design elements for the quickest and greatest visual impact.

A new visual-testing device which the inventor claims employs an entirely different principle helped three executives of the Happy Pet Products Co.,

Cassopolis, Mich. (50 employees; gross sales in excess of \$500,000), to decide between three final surface designs for the company's new folding box to package Tidy Cat—a hygienic, absorbent clay product that is used for cat sanitation.

A device was developed after years of experimentation by the art director of the carton supplier that, in his opinion, has advantages over other types of visual-measurement devices. This new instrument operates with constant and uniform sources of illumination, both inside the cabinet where the package is placed and in the testing room.

The inventor's contention is that judgment of legibility cannot be accurately measured during changes of illumination, because the time lag necessitated by the pupillary adjustments of the eye under varying levels of illumination creates false reading

results. And under low illumination, necessary for certain tests for visual selectivity and impact, the lower ranges of the spectrum, i.e., reds, purples, violets, lose their power to transmit a clean image.

In Happy Pet Products' case, use of the instrument came up when the company had to decide on the graphic design for its handy re-usable tray box, of special folding construction that permits the carton to be converted into a disposable tray to do away with the disagreeable chore of cleaning the cat pan. The sanitary clay is simply used in the box which, after a week or two of use, may be thrown away and replaced with a fresh package.

The new carton, which opens into a tray twice the size of the original carton by tearing two rip strips and cutting a corner perforation, won first place for superiority of construction in the 1960 Folding Paper Box Assn. of America competition.

It came into being after Edward Lowe, president of Happy Pet, took up the problem of upgrading the package for Tidy Cat, previously sold in bags.

Unusual construction of the box solved half the problem, but there remained the planning of surface design to demonstrate its purpose to consumers.

The carton-supplier's art department and independent design firms worked on it. Several outstanding designs were submitted and a number were discarded for various reasons. After months of work, the choices were narrowed down to three designs, but the three men responsible for the decision—president, vice president and general manager, and secretary-treasurer—could not reach a meeting of the minds. Each held out for his own preference.

And as days went by they got no closer to an agreement. The carton-supplier's art director decided it was just about the appropriate time to use

the visual-testing device he had been working on since 1954. He had seen too many valuable pieces of graphic art for proposed packages go by the board because of individual attitudes, he says.

He invited the three men to his office and ran the three designs through the testing device. Each man rated the designs independently, based on the specific elements which the three had previously agreed the design chosen must include.

After results were tabulated, the three men were amazed to learn that they had rated the designs in exactly the same order. Each had rated as first, design B (see cut), which gave most prominence to the re-use tray construction; as second, design C, which gave slightly less emphasis and copy explanation to the box construction and, as third, design A, which gave least attention to the box or how to use it. They had arrived at a decision—painlessly!

The only variable in this new testing device is a specially constructed series of lenses through which the packages are viewed. These lenses interpose a precisely controlled variable visual barrier between the subject taking the test and the design being tested. Holding a control switch, the person taking the test gradually decreases this visual barrier until first one element of the unit being tested and then other weaker elements become visually valid. As each element becomes visible or legible, as the case may be, the viewer releases the control button. The barrier stops at this precise point and a numerical rating is noted on a scale [Continued on page 207]

SUPPLIES AND SERVICES: "Polarascope" visual tester developed by Alf Nelson, art director and director of Dept. of Visiometrics, Crowell Carton Div., St. Regis Paper, Marshall, Mich. Tidy Cat "trox" tray box by Crowell Carton.



Final selection is design B, at left, which gives greatest prominence to new, re-usable tray-box feature. Executives were amazed to find they had rated boxes exactly in the same order on tester, although they had no agreement previously.





Spiral wrapping saves 80%

Indicative of the progress being made in the development of improved machinery and materials for application by packagers of industrial products is the new coiled-hose packaging system which has been installed by Goodall Rubber Co., Trenton, N. J. On an automatic machine specially designed for the purpose, gigantic coils (up to 82 in. in diameter) of plastic hose are spiral wrapped with waterproof, laminated, reinforced creped paper. Adjustable guides on the machine permit rapid change-over to accommodate varying sizes of the hose coil.

Goodall reports that automatic spiral wrapping achieves over-all packaging-cost savings of up to 80% compared with the former operation, in which the packager formed corrugated-board sheets into shipping cartons. According to the company, the new packaging method also increases packaging speeds and offers greater product protection. The waterproofness of the tightly wound creped-paper wrap permits the plastic hose to be stored outdoors regardless of climatic conditions, Goodall points out. *Creped-paper wrapping material and automatic spiral-wrapping machine by Ludlow Papers, Inc., Needham Heights 94, Mass.*

COST

Shipper standardization leads to a 31% cost reduction

Out of a packaging-redesign project that followed a sweeping modernization of manufacturing methods, Herman Miller, Inc., furniture manufacturer of Zeeland, Mich., has achieved standardization and simplification of shipping-carton construction that has resulted in a 31% decrease in materials costs. These

savings have been put right back into packaging in the form of multicolor surface design on white liner-board that converts the company's shippers into "traveling billboards." Before the simplification program, the packager required a variety of container sizes and a total of 19 different pieces of corrugated interior

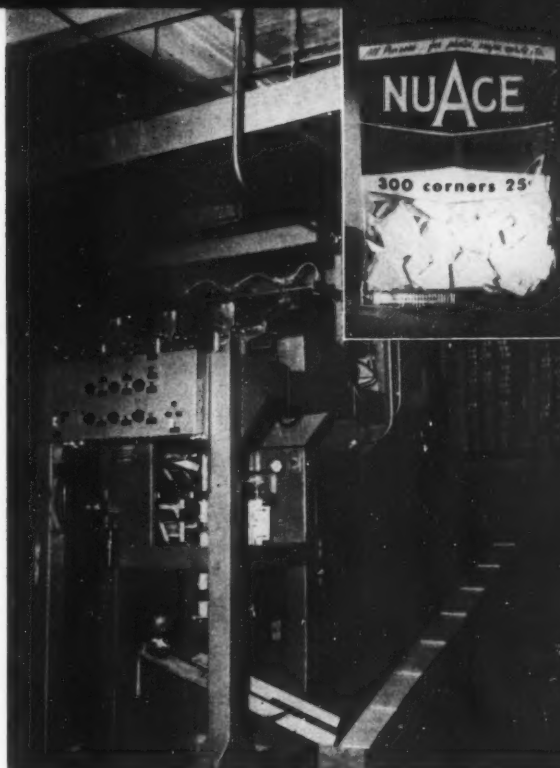
filler to prepare its line of furniture for shipment. Standardization has reduced the number of shipper sizes to five, and six fillers are all that are needed to provide in-carton protection for the company's entire line. Because of the reduction of filler requirements, the firm reports, package assembly has been speeded up greatly. And a new inventory-control system cuts annual orders of packaging material from 15 to two. *Corrugated cartons and inserts by Packaging Corp. of America, 1632 Chicago Ave., Evanston, Ill.*



Economical weight control

Until recently, Ace Art Co. had a weighing problem that compelled it to rely on costly, slow manual operations in the packaging of NuAce photograph-mounting corners. The problem: These items are so light that a package of 300 weighs less than $\frac{1}{2}$ oz. To insure accurate count, workers had to weigh each charge carefully, then hand fill the product into cellophane bags. Bag sealing also was a manual operation, requiring two workers.

But now—with the adoption of an automatic cellophane pouch forming, filling and sealing machine equipped with a sensitive weighing scale—Ace reports it has eliminated manual operations while increasing production speed by 50%. Before weighing, the scale is set to receive 308 corners (to prevent underweights) and then is depressed to make contact with a microswitch connected to the machine's dump motor. The scale reportedly will not discharge its contents until it receives precisely the predetermined count of corners. *Printed pouch material by Robert Corp., Lawrence, Mass., using Du Pont's 450-gauge "K" coated cellophane. Pouch former-filler-sealer by Mercury Heat Sealing Equipment Co., 2601-21 N. Howard St., Philadelphia 33.*



CUTTERS

Polyester boil-in bag cuts costs and product returns

With the adoption of tough, temperature-resistant polyester-film boil-in-bag packages for a line of Italian-style frozen-food specialties, the Dallas City Packing Co., Dallas City, Ill., reports that what was once a six-person packaging job now is accomplished by half the personnel—in less than half the time. In addition, says the company, use of the hermetically sealed film bag has eliminated former clean-up and package-rejection problems, and has cut direct packaging costs by at least 33%.

The company formerly packaged its My Favorite Italian Village line of foods in covered foil pans. Packaging was a manual operation that took considerable time and too often permitted improperly sealed containers to pass through, causing subsequent leakage and package damage, the firm reports. In the new packaging operation, film bags are filled semi-automatically and sealed on automatic machinery. The filled bag, marketed in a printed folding carton, is reported to eliminate "leakers" and to retain a hermetic seal that protects product freshness and flavor until the moment of opening. *Printed bags by Milprint, 4200 N. Holton St., Milwaukee 1, and Bagcraft Corp. of America, 3900 W. 43 St., Chicago 32, using Minnesota Mining's "Scotchpak" polyester film. Printed cartons by Milprint.*



PACKAGING INSTITUTE

In the 22nd in its series of annual National Packaging Forums, the Packaging Institute this month will turn its view forward to 1970. From a majority of the 79 seminar chairmen, moderators and speakers, the anticipated audience of more than 1,500 packagers will hear forecasts of a decade of high expectancy for packaging.

Theme of this year's forum at the Statler Hilton Hotel, New York, Oct. 31-Nov. 2, is "Packaging for the '60s" with pointed emphasis on a greater potential growth for packaging volume than for the total gross national product. The stage for this forward look will be set at the opening session, Oct. 31, when the staff of *Life* magazine will explore "Packaging Potentials for the '60s."

Mixed in with many practical talks on a variety of packaging types, materials and equipment during the three days of seminars that follow will be papers designed to look ahead for the next 10 years, based on trends, recent advances, and research and development work still under wraps.

Six of the 10 seminars will re-examine packaging subjects featured in recent PI Forums, with a look to the future, while others will highlight significant new trends and changes in the field.

On the afternoon of the opening day, Monday, Oct. 31, a seminar formerly labeled "Packaging Marketing" will this year pinpoint one important phase: "Packaging for Self Service." Another, "Corrugated and Fibreboard Materials," is a new subject of particular interest to industrial packagers for whom no specific seminar is scheduled this year. The third opening-day seminar is a PI standby on packaging research and development.

Three all-day seminars on Tuesday, Nov. 1, will cover important packaging interests: drug and pharmaceutical packaging, production line and machinery, and package printing.

The final half-day sessions on Wednesday morning, Nov. 2, highlight a new subject, "Flexible Packaging and Plastics," plus two standard areas, food packaging and container closures.

An innovation this year will be an open Wednesday morning meeting of the institute's Petroleum Packaging Committee featuring six packaging specialists in this particular field, an area that is also of special interest to industrial packagers.

There will be continuous displays depicting the work of PI's 31 technical committees, which also will be the subject of the closing luncheon program scheduled for Wednesday morning.

A PI business meeting and election Monday morning, luncheon meetings with featured speakers on each of the three days and a Tuesday evening reception and awards dinner, also with a featured speaker, will alter the pace set by 10 seminars. At the dinner, PI's fourth annual citations of an individual and a company for outstanding accomplishments in packaging technology will be accompanied

Packaging Institute's 22nd Annual Forum Statler Hilton, New York

Monday, Oct. 31

- 9 a.m.** Registration
- 10 a.m.** PI President's Address and business meeting
- 11 a.m.** Packaging Potentials for the '60s (*Life* magazine presentation)
- 12:15 p.m.** Luncheon and keynote address
- 2 p.m.** Three concurrent seminars on package marketing, packaging research and development, and corrugated and fibreboard packaging

Tuesday, Nov. 1

- 9 a.m.** Registration
- 9:30 a.m.** Three concurrent seminars on production line and machinery, drug and pharmaceutical packaging, and printing
- 12:15 p.m.** Luncheon and speaker
- 2 p.m.** Three concurrent seminars (continued from morning program)
- 6:30 p.m.** President's reception
- 7:30 p.m.** Awards dinner

Wednesday, Nov. 2

- 9 a.m.** Registration
- 9:30 a.m.** Three concurrent seminars on flexible packaging and plastics, food packaging, and closures. Also, open meeting of Petroleum Packaging Committee
- 12:15 p.m.** Luncheon and speakers

FORUM: THE 60's

*Growth potential
in the decade ahead
will be scanned
in three days of seminars
and addresses
at the 22nd annual session,
Oct. 31-Nov. 2
at New York's
Statler Hilton Hotel*

by scholarship and fellowship presentations and an award for the forum's outstanding technical paper.

Advance registrations indicate an attendance at least equal to last year's 1,258 individuals, plus 374 sharing multiple registrations, a total of 1,632. That forum, also in New York, both competed with and attracted attendance because of the concurrent Packaging Machinery Show. The last solo Packaging Institute Packaging Forum held in New York in 1957 drew approximately 1,500.

The reception and dinner fee this year is \$15. Daily all-inclusive registration rates for PI members are \$25 for Monday and Tuesday, and \$20 for Wednesday, including luncheon meetings each day. Daily all-inclusive registration rates for non-members are \$10 higher for each day. A special member's rate for all three days is \$65 and, for non-members, is \$95. All tickets are transferable. Non-member companies joining PI by the end of the year will have part of the three-day charge applied toward their Corporate Membership fee.

Roy W. Abbing of the Merck, Sharpe & Dohme Div. of Merck & Co., Inc., is forum chairman. W. B. Tibbets of Union Carbide Plastics Co. is awards dinner chairman.

The complete program follows:

Monday, Oct. 31

- 9:00 Registration**
- 10:00 Call to Order**
President's Address: C. W. KAUFMAN, director, Research & Development Div., National Dairy Products Corp. Packaging Institute's Annual Business Meeting.
- 11:00 Presentation by the staff of Life magazine:**
"Packaging Potentials for the '60s."
- 12:15 Opening Luncheon and Keynote Address**
"Packaging for the '60s." ORLIN JOHNSON, vice president, production, Bristol-Myers Products Div., Bristol-Myers Co.

2:00 Package Marketing Seminar. Theme: Packaging for Self-Service Merchandising. ROY D. CONNELL, merchandise manager, J. Wiss & Sons Co., seminar chairman

Packaging as a Merchandising Aid—THOMAS CATHCART, sales manager, folding cartons, Continental Can Co., Boxboard & Folding Carton Div. Packaging—An Aid to the Rack Jobber and to Non-Food Sales in the Supermarket—EDWARD KORENVAES, executive vice president, Akorn Housewares Corp., and an officer of A.R.M.I.

Who Has All the Answers? . . . the "Articulate" Package—ROBERT G. NEUBAUER, president, Robert G. Neubauer, Inc.

The Monotony of Excellence in Packaging—GERALD STAHL, Gerald Stahl Associates

2:00 Corrugated and Fibreboard Packaging Seminar. Theme: Packaging for the '60s—FRANK P. COONS, packaging engineer, Johnson & Johnson, seminar chairman

Dry Firmness When Wet—CHARLES O. ROTH JR., regional product development engineer, West Virginia Pulp & Paper Co.

Aluminum Foil Makes the Difference—RICHARD G. LABUDDE, packaging section, Aluminum Corp. of America

Speculating on the '60s—Fibreboard Material Developments—ALLAN C. BEARDSSELL, director, New Products Div., The Mead Corp.

Putting Corrugated to Work in Marketing—CARL J. BEGEMANN, merchandising manager, A.S.R. Products Corp.

2:00 Packaging Research and Development Seminar. Theme: Research and Development . . .

Springboard for Tomorrow—PAUL B. REIMAN, research supervisor, Packaging Laboratories, Continental Baking Co., seminar chairman

What Value . . . Packaging Education and Research Through the University?—H. G. WALTER, executive director, Packaging Foundation, Inc., Michigan State University

The Contract Research Approach to Packaging—PETER B. BAKER, senior staff member, Arthur D. Little, Inc.

Planting People and Growing Ideas—G. T. SCHJELDHAHL, president, [Continued on page 212]



Easy to carry, Kuehmann Foods' new package for 1½ lbs. of potato chips is a polyethylene bag inside a corrugated carton. The one-trip container, replacing a metal can that required a 75-cent deposit, eliminates collection and clean-up problems while sharply reducing the costs of storage and shipping.

Throw-away in bulk

Capitalizing on retail acceptance of 'institution-packed' bulk potato chips.

Kuehmann Foods gives up a returnable can

in favor of a disposable bag-in-carton. Result: a 500% sales increase

The packager who stays alert to changing consumer buying habits is apt to discover a gold mine of new sales. That's just what happened to Kuehmann Foods, Inc., Toledo, when it switched from a traditional returnable can to a disposable polyethylene-bag-in-carton for bulk quantities of its Q-Man potato chips. The company reports a 500% total sales increase since adopting the convenient new throw-away package, as well as a reduction in storage and shipping-space requirements and the elimination of a costly handling procedure.

Following long-standing trade practice, Kuehmann for a number of years had packaged 1½-lb. quantities of potato chips in cylindrical metal containers, which were designed primarily for sale to the institutional market. Recently, however, the company found that bulk-packaged potato chips were beginning to achieve increasing acceptance as a consumer item. The question: How to realize the full potential of this huge sales opportunity? The answer: Develop a package better suited to the demands of today's convenience-minded housewife.

Although entirely serviceable, the metal can had disadvantages as a self-selection container, says Kuehmann. It required the shopper to leave a 75-cent deposit, while its bulk and shape made it an inconvenient carry-home item. Moreover, returned empties had to be picked up from the consumer and cleaned before re-use by the packager.

The company's new no-deposit container eliminates all these difficulties. It consists of a polyethylene bag inside a slotted, single-trip corrugated carton fitted with a handle for carrying convenience. A two-color design printed on the carton's bleached kraft outer liner does an effective job of attracting shopper attention to the product at the point of sale, according to the packager. Prominent price marking adds to its self-selection appeal.

In addition to sparking the sales increase, the square-shaped container when filled is reported to take up approximately 25% less shipping space than was required by the same number of cylindrical metal cans. And because empty cartons are stored knocked down, 25,000 of them can be put in the same storage area which previously could hold only 2,500 cans, the company adds.

Kuehmann also has taken into account the need for faster packaging speeds to keep pace with the increased demand for its product. After rapid carton set-up, a simple jig is used to position the empty film bag neatly into the outer container. A pre-weighed charge of potato chips is automatically dumped into the bag, whose top is then twist tied. The carton's center-tuck top flaps are locked in place to complete the packaging operation.

SUPPLIES AND SERVICES: Corrugated carton by The Mead Corp., Mead Containers Div., Dayton 2, O. Polyethylene bag by Pexco Bag Mfg. Co., Toledo, O.



"Consistent uniformity is one reason we use Knox," says leading household products manufacturer

"Uniformity of size, along with strength and quality, make up the three essential elements we demand in our glass bottles," says the Supervisor of Bottling of one of the nation's foremost manufacturers of liquid household cleaners and other consumer products.*

"Knox Glass, Inc., has been furnishing us this high caliber glass for a period of twelve years now, and its breakage rate, as it goes through the various steps of unloading, conveyor transportation, filling, capping, labeling, case packing, and shipping is so low as to be negligible, actually amounting to less than 1%.

"But consistent manufacturing to our exact specifications is probably the thing we stress most. The wrong-sized bottle — any deviation from specs — can play havoc with our production lines. Knox uses our molds and has, evidently, mastered the art of obtaining proper glass distribution — we have neither breakage nor size problems with their bottles."

Find out how the new / Knox Glass can serve you — consistently. Contact Knox Glass, Inc., Knox, Pa., or any one of 37 sales offices.

*Name available on request.

the new/ **KNOX GLASS**

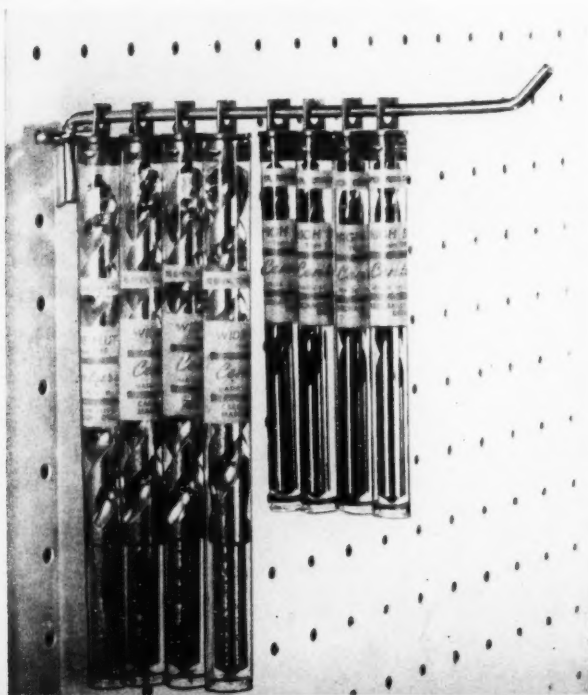
Hang-up plug closure

Century Drill wins new self-selection distribution and a 20% sales increase with an ingenious polyethylene fitment that takes a problem package out of hiding and on pegboard display

In packaging, too, little things can mean a lot. Consider the case of Century Drill & Tool Co., New York. Since adopting a polyethylene "hang-up" plug closure that moves a difficult-to-display tubular container out of retail hardware bins and on to self-selection pegboards, this medium-size company (500 employees) has broadened its distribution of cutting drills to include supermarkets and other big-volume outlets. Results: a 20% sales increase and a rush of orders that has the company considering a switch from manual to automated packaging.

Interestingly, this packaging success story has

Sturdy support for heavy metal drills in tubular acetate containers is provided by one-piece, injection-molded plug closure. Molded-in ridges on opposite sides of the hang fitment snap into corresponding slots in the wall of the semi-rigid container for positive engagement.



been achieved without changing the basic single-unit container (a transparent, semi-rigid, cylindrical acetate tube with a welded bottom). The new closure makes all the difference. Although the hang plug is slightly more costly than the cap it replaces, the packager points to the sale charts as proof that the merchandising benefits of hang display are well worth the added investment made by the company in packaging costs.

Century formerly capped the container with a standard friction-fit metal closure. Lacking the ability to stand upright without toppling, the tall, thin, cylindrical container was relegated to horizontal display in bins and trays.

The polyethylene plug closure which makes the tube hangable is injection molded in one piece. A square-shaped, flattened extension at the cap's top has a circular hole in its center, for mounting the container on pegboard rods. This hang feature, Century points out, is also convenient for the home handyman to store drills on workshop wall pegs.

Because the plug closure must support from above the relatively heavy weight of varying sizes of metal drills, positive cap-to-tube engagement is necessary. Secure attachment is achieved by small ridges molded into opposite sides of the plug which snap into correspondingly located slots in the upper wall of the semi-rigid acetate container. The plug is snapped in for hang display; an easy twisting motion removes it for access to package content.

For shopper convenience in identifying the size of the drill contained in each tube, size information is hot stamped on opposite sides of the closure.

SUPPLIES AND SERVICES: Container and closure by Flex Products Corp., Rutherford, N.J., using Tennessee Eastman cellulose acetate and polyethylene.

Simple details of plug and container construction that "lock" the components together for hang display are shown here. Closure insertion and removal are accomplished with an easy twisting motion.



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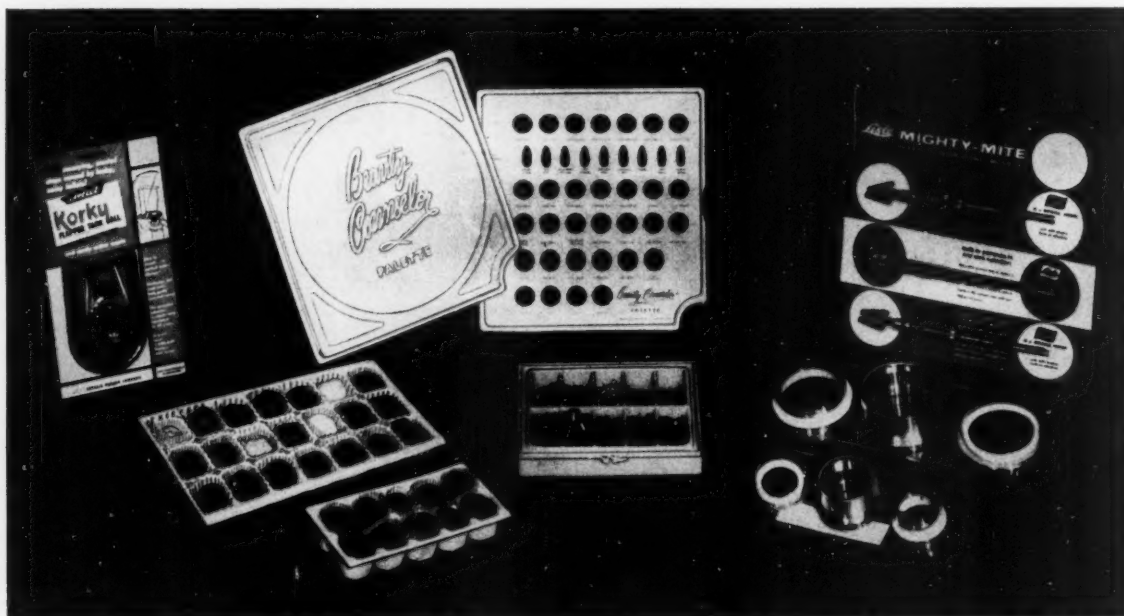
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Glue sealing with PE coatings

New studies show that adding a small amount of animal glue to low-cost dextrin adhesive gives excellent bonds, with surface treatment of the polyethylene coating on paper and board much less critical.

*By Sherwood Leeds**

The economy and functional advantages of polyethylene-coated paper and paperboard are well known in the packaging field. Existing packaging techniques and machinery are rapidly being adapted for these versatile paper-plastics materials. One important and widely used technique is the construction of paper and paperboard packages by the glue-sealing method.

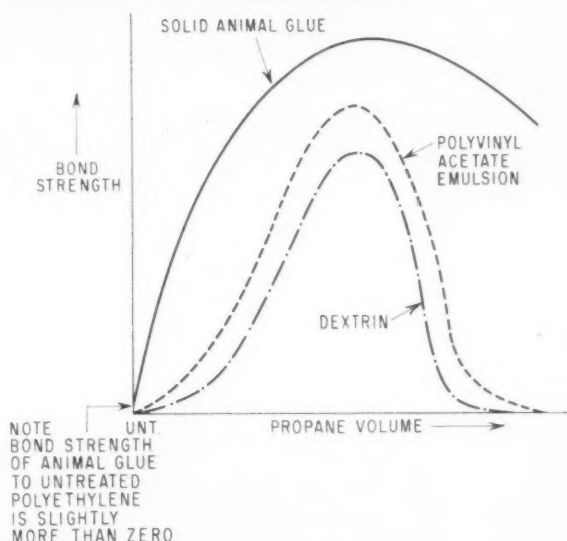
Starch and its dextrin derivatives are the lowest cost, most popular of all adhesives used in today's packaging. They are widely used, primarily because these highly machinable adhesives can be adjusted to meet a wide variety of package bonding requirements. Dextrin adhesives can form positive bonds between porous materials and surface-treated polyethylene-coated webs, but the strength characteristics of these bonds depend to a great extent on the careful control of surface treatment.

Union Carbide Plastics Co.'s Development Laboratories intensively investigated surface treatment. The result is a new technique whereby the high performance of dextrin adhesives is maintained without the need for critical control of the surface-treatment process. Critical control is eliminated simply by adding to a standard, low-cost dextrin adhesive a small amount of a liquid animal glue, which permits a wider latitude in suitable treating conditions. This adhesive formulation proved to be economical and practical for combining the desirable low-cost and good-adhesion features of dextrin adhesives with the wider treating latitude available with animal glues. A further advantage of this modified dextrin adhesive is its improved adhesion

to both flame and electrically treated polyethylene-coated surfaces. Modified dextrin adhesives should provide a valuable tool for fabricating packages from polyethylene-coated materials.

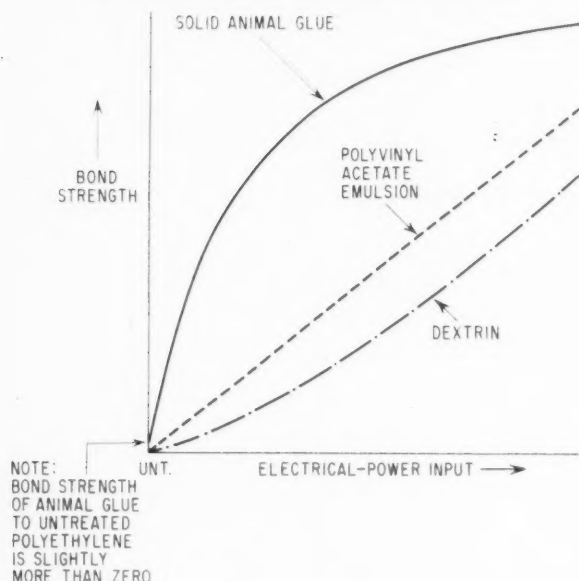
This article discusses the standard commercial packaging adhesives, along with these modified dextrin adhesives. The article will tell of the materials and procedures used in tests of packaging adhesives for polyethylene-coated substrates and

Figure 1. Polyethylene flame-treating requirements for non-tacky adhesives



*Development Dept., Film, Sheet & Packaging Div., Union Carbide Plastics Co., Bound Brook, N. J.

Figure 2. Polyethylene electrical-treating requirements for non-tacky adhesives



will also present the data obtained in these tests.

Briefly, the conclusions which were arrived at through these test are as follows:

1. Conventional packaging glues are effective in sealing polyethylene-coated paper and paperboard.

2. Firm bonds between the polyethylene and paper surfaces were produced by each of the two general classifications of adhesives which were tested in this study—tacky and non-tacky.

3. For best bonds with non-tacky glues, proper treatment of the polyethylene surface is necessary.

4. Adding a small amount of liquid animal glue to a standard borated dextrin packaging adhesive appreciably increases the latitude of suitable treating conditions for flame-treated or electrically treated polyethylene-coated paper.

5. Firm polyethylene-to-paper bonds can be achieved with tacky adhesives on untreated or weakly treated polyethylene surfaces.

Included under the classification non-tacky are vegetable glues, polyvinyl acetate emulsions and animal glues. These adhesives are commonly used to manufacture bags, cartons, set-up boxes and other types of paper containers.

Tacky glues for packaging are generally dispersions or latices containing natural or synthetic rubber, resins or combinations of these materials. Tacky adhesives have not been used in large volume for packaging, thus far, because they sometimes present problems relative to machining and cold flow. It is believed, however, that these glues have a great deal of practical potential for packaging use.

Commercial packaging adhesives

Tables I and II present an over-all comparison of the various tacky and non-tacky commercial packaging adhesives tested. Although the "excellent" to "poor" ratings were selected arbitrarily, it is believed they give a good indication of the relative bond strength as well as permanence of the particular adhesives listed.¹

1. *Time to develop initial tack.* This was the only

¹Peel strength below 300 gms./in. was considered poor; 301-500 gms./in. was fair; 501-1,000 was good; 1,001-1,200 was very good, and over 1,201 gms./in. was excellent. (Note: In polyethylene-to-paperboard tests, strengths over 1,000 gms./in. are not applicable. Above 1,000, paper fibres tear completely.)

Table I: Non-tacky polyethylene-to-board packaging adhesives

Designation ¹	General Type	Approx. ² price per lb.	Time to develop initial tack, seconds	Properties of bond at room temperature				Permanence of bond		
				Peel strength		Resis. to cold flow		Resis. to aging		Humidity resis. 70 deg. F. 122 deg. F.
Adhesive A	Aqueous solution borated dextrin	\$0.08	30 or less	Poor	Good	Fair	Exc.	V.G.	Good	Poor
Adhesive B	Aqueous starch dextrin paste	0.08	30 or less	Poor	Fair	Fair	Exc.	V.G.	Exc.	Exc.
Adhesive C	Polyvinyl acetate emulsion	0.35	30 or less	Poor	Fair	—	Exc.	—	—	—
Adhesive D	Polyvinyl acetate emulsion	0.35	60	Poor	Good	Exc.	Exc.	V.G.	—	—
Adhesive E	Solid animal glue	0.19 ³	60	Poor	P-655 ⁴	P-26 ⁵	Exc.	Exc.	Exc.	V.P.
Adhesive F	Aqueous liquid animal glue	0.13	60	Fair	Good	Fair	Exc.	P. to F.	Fair	P. to F.

¹All adhesives applied with No. 24 R.D.S. Coating, R.D. Specialties, Webster, N.Y.

²Prices are for single-drum quantities.

³Price for dilution with 20% water. Price of solid cake approximately \$0.255.

⁴Strong bond. 100% paper fibre tears of 655 gms. for 1-in. specimen.

⁵100% paper fibre tears after 26 hrs.; therefore, not a cold-flow failure.

machine-handling property evaluated. This property alone, of course, is not enough to indicate over-all machine suitability of adhesives. On the basis of the test used, only three of the 11 adhesives tested took more than the 30-sec. minimum to develop tack. The polyvinyl acetate emulsion listed as Adhesive D appears to develop tack too slowly for high-speed operations. Both animal glues also required 60 sec. for tack development, but this does not necessarily indicate their unsuitability for high-speed machining. Animal glue seems to require a much finer applicator (or applicator adjustment) for applying the same coating weights than other types of glues tested in these studies.

2. *Peel strength.* Non-tacky adhesives—vegetable, polyvinyl acetate emulsion and animal-glue types—were found suitable for polyethylene-coated paper and paperboard if the polyethylene surface is highly treated. Generally, as the level of surface treatment is adjusted in order to improve ink adhesion, glue adhesion also tends to improve.

Different glues require different amounts of treatment for best results. With some, the treating operation proved much more critical than with others. When the polyethylene surface was effectively treated for each glue, the six non-tacky test glues showed no significant difference in adhesion performance. When used on untreated polyethylene-coated paperboard, these same hard, dry adhesives exhibited extremely low bond strength. As an example, following are specific peel-strength values for three of the adhesives applied to untreated polyethylene-coated paperboard:

Adhesive type	Table I designation	Peel strength gms./in.
Borated dextrin	A	0
Polyvinyl acetate emulsion	D	7
Solid animal glue	E	70

The degree of treatment required for adequate adhesion of these materials to a polyethylene surface follows the same order. Figures 1 and 2 illustrate that dextrin has the highest treating requirements; polyvinyl acetate emulsion is slightly less critical, and solid animal glue has the broadest treating range. As previously stated, experience has shown that by proper control of flame and electrical treating conditions, it is possible to obtain adequate adhesion with each of these types of glues.

The basic end-use differences between non-tacky and tacky adhesives can be seen by comparing the data in Table I with the data in Table II. Obviously, it is necessary to treat the polyethylene surface for good adhesion of non-tacky glues. Tacky glues, on the other hand, provide good bond strength between

Figure 3. Effect of flame treatment on adhesion of dextrin adhesives to polyethylene-coated paper

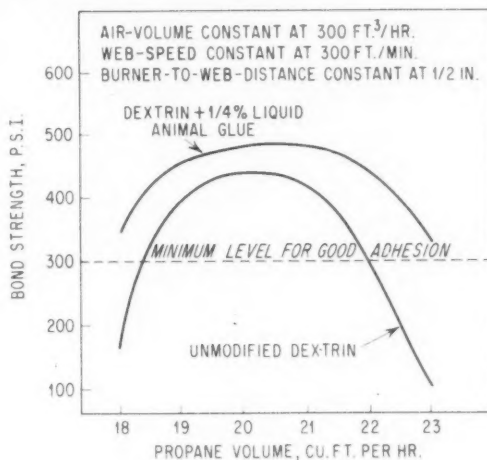
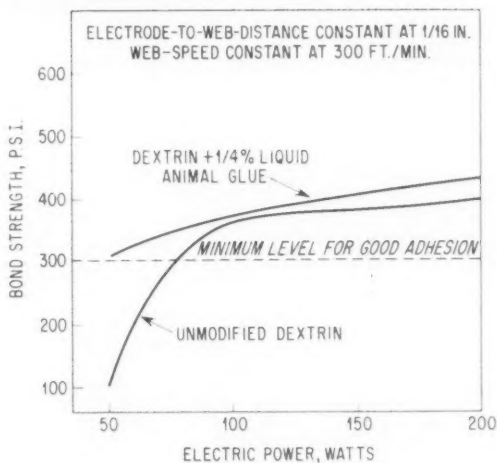


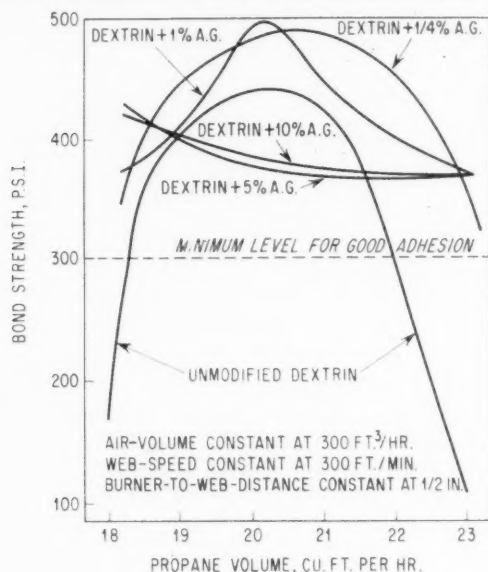
Figure 4. Effect of electrical treatment on adhesion of dextrin adhesives to polyethylene-coated paper



untreated or weakly treated polyethylene and paperboard or another porous surface. Some improvement in the bond strength of tacky adhesives can be achieved by intensely treating the polyethylene; however, the degree of improvement is much less than for the non-tacky types of adhesives.

To be certain that treatment is adequate for a particular glue, that glue should be applied and the adhesion properties tested. To avoid possible decay of the treated surface on polyethylene-coated paper in storage, the glue should be applied with

Figure 5. Effect of flame treatment on adhesion of various animal-glue-modified dextrin adhesives to polyethylene-coated paper



minimum handling and delay after treatment.²

3. *Resistance to cold flow.* Tables I and II present cold-flow values obtained from both peel and shear tests. For most paper and paperboard packaging applications, resistance of a glue to cold flow in shear is particularly important. In storage and in handling, there is a greater tendency for the glued sections of a package to pull away from each other in shear than to peel apart. All non-tacky glues demonstrated excellent resistance to cold flow in

²Experience has shown that no decay of treatment occurs in rolls of unsupported polyethylene film stored at room temperature for a year or more, although this decay sometimes occurs with treated polyethylene coatings on paper.

shear, while only two of the five tacky glues showed excellent resistance—those designated Adhesives G and H. Adhesive H, however, coagulated after three months' storage at room temperature. The aqueous dispersion, Adhesive G, was suitable for use after storage for well over a year at room temperature.

4. *Resistance to aging.* This was determined by storing bonded samples for two weeks at 60 deg. C. (140 deg. F.) and observing changes in bond strength after samples cooled to room temperature.

Humidity tests were made on the four water-soluble materials—A, B, E and F in Table I.³ Tests were run at 100% relative humidity at room temperature and at 50 deg. C. (122 deg. F.).

The two vegetable adhesives provide an interesting comparison. Adhesive B, a starch-dextrin material of low degree of conversion, was found to have "excellent" resistance to humidity at both temperatures. Adhesive A, a high-conversion dextrin, showed only "good" resistance to humidity at room temperature and "poor" resistance at 50 deg. C. When starch is converted to dextrin by heat, the molecules are broken down to smaller size and are therefore affected more by water or water vapor. Most likely due to its higher water solubility at room temperature, the liquid animal glue (F) had much lower over-all resistance to humidity than the solid animal glue (E).

5. *Over-all ratings—non-tacky adhesives.* No non-tacky glue showed any clear-cut general superiority over another. The vegetable adhesives have a price advantage and they develop tack rapidly. Polyvinyl acetate emulsions have [Continued on page 200]

³Since there was some question as to the humidity resistance of the starch-dextrin and animal glues, these were tested. It is common knowledge that the polyvinyl acetate emulsions, the resin dispersions and latices, and synthetic rubber-based adhesives have good resistance to humidity.

Table II: Tacky polyethylene-to-board packaging adhesives

Designation ¹	General Type	Approx. ² price per lb.	Time to develop initial tack, seconds	Properties of bond at 70 deg. F.				Permanence of bond
				Peel strength		Resistance to cold flow		Resistance to aging
				Untr.	Tr.	Peel	Shear	
Adhesive G	Aqueous resin dispersion	\$0.36	30 or less	Good	Good	Fair	Exc.	Excellent
Adhesive H	Aqueous resin latex	0.34	30 or less	Good	Good	Poor	Exc.	Coagulated in container during storage
Adhesive I	Aqueous resin dispersion	0.46	30 or less	Fair	Good	Poor	Poor	Excellent
Adhesive J	Aqueous resin dispersion	0.28	30 or less	Good	V.G.	Poor	Poor	Excellent
Adhesive K	Syn. rubber chlorinated, solvent	0.34	30 or less	Exc.	Exc.	Poor	Poor	Good

¹All adhesives except "I" and "K" applied with No. 24 R.D.S. Coating Rod. Adhesive "I" applied 3 wet mils thick with Gardner ultra applicator in accordance with supplier's instructions. Adhesive "K" applied with No. 8 R.D.S. Coating Rod.

²Prices for single-drum quantities.

Diagonally slotted containers

Quartermaster research suggests a new design for shipping cases which would eliminate sleeves in military use and provide a sturdier box for general use. By John O. Younger*

Where no loss of container efficiency is involved, both manufacturers and users are obviously interested in any device for lowering costs. A diagonally slotted container (DSC) has been conceived (Figure 1) with the thought in mind that, without sacrificing the protective potential of sleeves, a substantial saving could be made by designing a container that would not need a sleeve.

A sleeve greatly increases the ultimate strength of a regular slotted container (RSC), primarily by reinforcement of four horizontal score lines. The doubling of the fibreboard layers on the two end panels and the 50% increase of the layers in the top and bottom panels undoubtedly also contribute to the increase in strength. Sleeves are predominantly used by the military in the shipment of subsistence items and particularly ration items of all types.

The manufacture of the new diagonally slotted container presents some operational problems when handled on standard machinery, but they can be surmounted. The savings involved in eliminating the sleeve and the hand operation necessary in placing the sleeve on the container are considerable. The possibility that a diagonally slotted container as opposed to the regular slotted container with sleeve would, despite additional manufacturing procedures, not only be cheaper to make, but better in performance in some uses prompted the experiment about to be described in this paper.

This new type of container also has much to offer the large-volume shipper of commercial goods. Laboratory testing as well as shipping tests have shown that performance of the DSC is equivalent to that of the sleeved RSC container. It is evident that the additional strengthening effected by the proposed DSC gives the user an added protective factor without going to the sleeve or to a more expensive container material. Since a perfectly flat bottom and top exist in the closed DSC, it is one type of container that eliminates the possibility of canned

goods "riding" up or down against the chimes of adjacent cans due to the "step" effect of the top and bottom closure of the RSC.

The purpose of this study is twofold: (1) to describe a production run and point out the procedural differences in manufacturing diagonally slotted containers and (2) to present a cost analysis, based on this production run, confirming the economy of the modified container design.

Experimental

Containers. Two types of containers (Figure 2) were manufactured: the diagonally slotted container (DSC) and the regular slotted container (RSC). Sleeves to fit the latter style were also manufactured. The container dimensions were selected on the basis of the unit packages to be contained: (1) six No. 10 cans (603 x 700) and (2)

Figure 1. The diagonally slotted case, in addition to strength with economy, offers the considerable advantage of a perfectly flat bottom and top, holding contents securely.

* Container Technologist, Research & Methods Analysis Branch, Container Div., Quartermaster Food & Container Institute for the Armed Forces, Chicago. This paper reports research undertaken for the Quartermaster Research & Engineering Command, U. S. Army, and has been assigned No. 1037 in the series of papers approved for publication. The views or conclusions are those of the author and do not necessarily reflect the views or endorsement of the Department of Defense.

Table 1: Number of containers or sleeves and weight per bundle

Board type (container or sleeve)	No. per bundle	# 2½ can size		No. per bundle	# 10 can size	
		Weight (lbs.)			Weight (lbs.)	
		RSC	DSC		RSC	DSC
V2s container	10	36	38	10	35	36
V2s sleeve	20	33	—	20	34	—
V3s container	10	33	34	10	33	32
V3s sleeve	20	33	—	20	34	—
V3c container	20	42	44	20	39	42
V3c sleeve	35	22	—	35	24	—
K5c container	25	37	40	25	39	38
W5c sleeve	35	22	—	35	24	—
200-lb. container	30	48	48	30	39	38
200-lb. sleeve	35	22	—	35	24	—

twenty-four No. 2½ cans (401 x 411). Five grades of fibreboard were used. At the conclusion of the production run, based on time study and production rates, the manufacturer supplied price quotations for the two styles of container in the various sizes and grades based on carload quantities.

Containers were manufactured in five grades of solid and corrugated fibreboard, as follows: V2s, V3s, V3c, W5c and 200-lb.-test domestic corrugated. The component materials used in the above fibreboard grades were of a quality that would meet the requirements of existing specifications on solid and corrugated fibreboard, namely, Federal

Specification No. PPP-B-636, dated 22 April, 1957, and entitled "Boxes, Fiber."

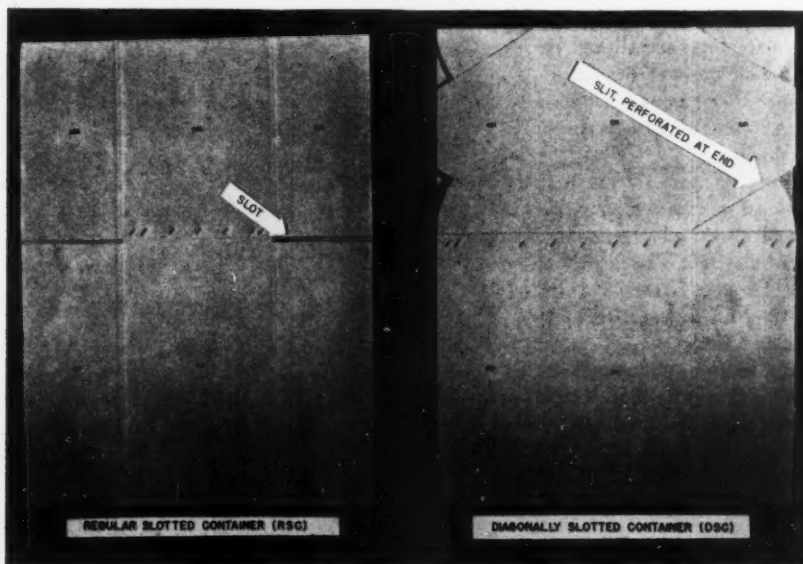
The V2s board was manufactured using Weather-tex kraft linerboard for the top and bottom liners. These sheets were composed of two high-sized 16-point (nominal caliper) kraft sheets laminated with 15 lbs. of asphalt per thousand square feet (total combined caliper, 30 points). The filler portion of this board was comprised of two 16-point sheets of a weatherproof high-sized jute board. The adhesive used in the pasting operation was a polyvinyl-acetate type (Borden's "Cascorez").

The V3s board was fabricated with two 22-point weatherproof jute liners and two 22-point weather-proof jute fillers. The asphalt laminant and the adhesive for the liner stocks were the same as those used for the V2s board.

The V3c corrugated board was manufactured using 90 lbs. per thousand square feet Weather-tex kraft liner stock of 23-point caliper. The filler portion of the sheet was 10-point, 38 lbs. per thousand square feet weatherproof corrugating material. For this limited procurement, a Fourdrinier kraft sheet was used, although a number of various corrugating materials can be used equally well to fabricate V3c board. The adhesive used on the single and double facers was a silicate-protein type.

The W5c corrugated board was manufactured using Weathertex kraft liner of a lighter weight and caliper—62 lbs. per thousand square feet and

Figure 2. Comparison of folded blanks shows at a glance the difference between the regular slotted shipping container and the diagonally slotted container.



16-point caliper. The corrugating media for this board was of two varieties. A portion of the board was manufactured using a 10-point, 38-lb.-per-thousand-square-foot kraft sheet, the same as that used in fabricating the V3c. The balance of the roll remaining after producing the V3c was used in producing the W5c. The remaining production of W5c was made using a 10-point caliper, 30-lb.-per-thousand-square-foot semi-chemical hardwood media. Either of the two materials used for corrugating was perfectly acceptable in that all specification requirements for component parts, as well as the finished board, were fulfilled.

The 200-lb.-test domestic corrugated board was fabricated of 14-point caliper, 52-lb.-per-thousand-square-foot jute liner and 9-point caliper, 26-lb.-per-thousand-square-foot semi-chemical corrugating media. A starch-type adhesive was used in the single and double facing operations.

The solid fibreboard, manufactured in V2s and V3s grades, was combined on a laboratory paster unit. The adhesive used for laminating the components is a polyvinyl-acetate type (Borden's Cascorez). After the liner and filler layers have been pasted together, the board travels through a series of press or squeeze rolls, then through the slitters that slit the stock to the desired width and, finally, past the cut-off knife for cutting to the predetermined length. Following the pasting operation, the sheets or blanks go through a Swift printer-slitter that does the printing, scoring and slotting operation (only the RSCs were slotted in this operation.)

The final operation in the manufacturing process for this type of container is sealing the manufacturer's joint. This may be done by taping a butt joint, or gluing or stitching a flap joint. For all containers discussed here, a stitched joint was used.

The diagonally slotted containers received an additional manufacturing step following the printer-slitter, wherein the printed and scored, but un-slotted container blanks are run through a Sheridan die-cutting press (Figure 4).

It is because of the requirements for this die-cutting operation that the blank size on a diagonally slotted container is 1 in. greater in width than is the blank size of a regular slotted container. This increased width is to allow room for the grippers on the Sheridan press to grab the blank being fed into the press and, in addition, to allow for a small amount of trim on the rear side of the blank. Without this additional amount for trim at the rear of the blank, the amount required for the gripper arms approximates $\frac{3}{4}$ in. If the additional $\frac{1}{4}$ in. is allowed at the rear of the blank, die cutting will always produce a uniform-size die-cut blank.

The final step in the die-cutting operation is strip-

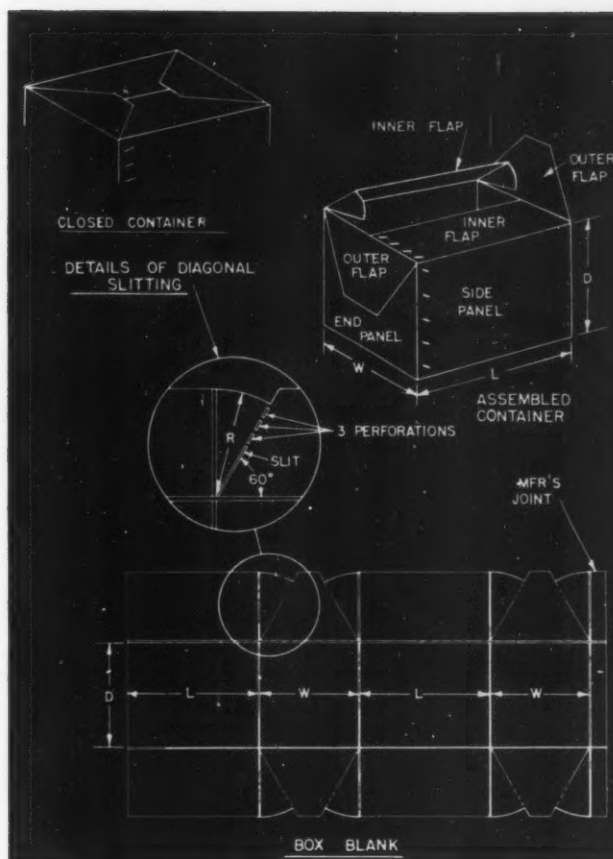


Figure 3. This diagrammatic drawing gives details of the design of the new diagonally slotted container, which needs no sleeve.

ping the die-cut strips or cut-outs from the container. This is done on bundles of 25 containers. During much of the production run on the diagonally slotted containers, production rates of 800 to 850 blanks per hour were attained.

The corrugated board was produced on a 78-in.-width Langston corrugator equipped with the continuous-running double-facer feature. In this operation, a silicate-protein type of adhesive is used in manufacturing V and W board, while a starch adhesive is employed in fabricating the domestic-type corrugated. An automatic Langston cut-off unit is used with the continuous-running double-facer feature. This corrugating machine is equipped with the automatic programming device or order changer. The slitter and scoring rolls for the following two orders are set in advance of the running of these orders. In like manner, the next setting of the cut-off knives has been determined.

Upon completion of one order and at the time the switch is thrown to set the automatic order changer in operation for the next order, the corru-

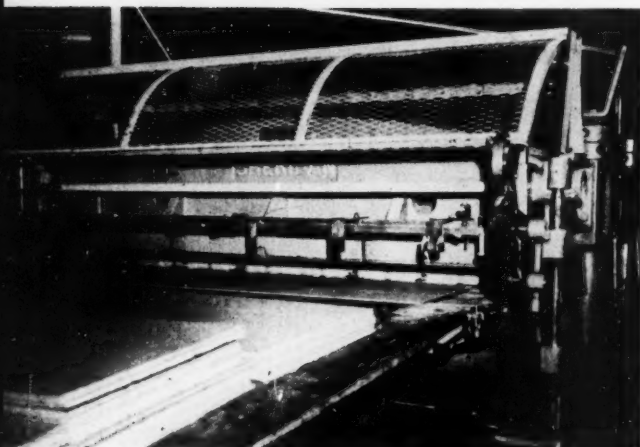


Figure 4. Additional step in manufacture of the diagonally slotted container is pass of printed and scored—but unslotted—blanks through a conventional die-cutting press.

gator is speeded up or slowed down to achieve a speed of 200 ft. per minute. At this point the oncoming web is cut by the single-revolution shear located just before the slitter and scoring rolls. Simultaneously, the speed of the double facer is reduced to 30 ft. per minute. During the period of operation at this reduced speed, the single-faced board accumulates on the "bridge." After the tail of the first order passes the slitter and scoring rolls and before the oncoming web of the corrugated material which has been reduced in speed reaches

Figure 5. In experimental manufacture of the diagonally slotted container, the stitches were applied at each end of the stitched seam, using a modified Bostitch stitching machine.



these rolls, they are turned to the new position required for the new order. Immediately after the trailing web passes through the cut-off section, this too is automatically changed by means of a Reeves drive arrangement to the newly established cut-off lengths. As soon as the leading web passes through the slitter and scoring rolls and before reaching the cut-off unit, the machine speed is again increased to the former rate of 200 ft. per minute.

When the machine is running satisfactorily at the 200-ft.-per-minute speed, the scoring is of proper depth and in the right location, the slitter widths and cut-off lengths are as called for in the order, and the edge trim is distributed to the liking of the operator, all operations are simultaneously speeded up, often to speeds in excess of 400 ft. per minute.

After the fabrication of the corrugated board, including the flap or horizontal scoring, slitting to width and cutting to length, the container blanks next pass through a printer-slitter operation for which either a Hooper or a Langston printer-slitter is customarily used. This operation produces a container blank that is completely scored, printed and slotted, and ready for stitching.

In the case of the diagonally slotted containers, the container blank is completely scored and printed; however, the blank is not slotted.

The manufacturers' joint on the container was stitched on a modified Model 385 Bostitch stitcher.¹ In the stitching of the diagonally slotted containers, tie stitches were used at each end of the stitched seam, although this would seem to be of dubious value considering that both ends of the manufacturers' joint are sealed under the top flaps.

Trade practice requires that containers be bundled into units of multiples of five up to a weight of approximately 40 lbs. per bundle. Table I shows the count and weight per bundle for the various containers produced.

In tying the bundle, the regular slotted containers are usually tied with two cords placed girthwise over the bundle approximately 4 in. from the end of the container bundles. Because of the peculiar nature of the diagonally slotted containers, this type of container was bundled using two lengthwise and one girthwise cord around the center of the containers. The girthwise cord was added primarily as a means of holding the lengthwise cords in place and to prevent possible loss of the containers due to loosening of the cord when the containers were placed under considerable pressure such as exists in bundles located in the lower layers of containers

¹ A standard machine is constructed so that when a container is fed into the machine, the gripper rolls on the machine pull the container under the stitching arm and the operation does not start until after the entire width of the top flap is drawn into the machine. In like manner, the stitching terminates before the entire box has passed through the machine.

piled in a freight car. This extra tying operation and the extra cord, as well as the extra time required, contributed to a small extent to the price increase for the diagonally slotted container.

Results and discussion

Commercial production of the diagonally slotted container demonstrated that with only one added operation, a container of this style can be made economically on standard equipment. The added operation increases the cost of the container slightly.

Because of the extra number of stitches (some-what more than twice as many as are used for the regular slotted container), the time required for the stitching operation of the diagonally slotted container is considerably greater (and hence more expensive) than that required for the regular slotted. In this initial production, the slowness of the stitching operation probably contributed to the higher cost. It is likely that with further experience in producing such a container, with more machines available to stitch the new-type container and with some possible slight additions or modifications to the existing machinery, the stitching procedure could be speeded up considerably. For example, one machine modification that probably could be made at relatively low cost would be a funneling mechanism rather than the present single-bar guide.

Results of the trial run indicated that additional development work is necessary with regard to the size and number of perforations used in the die-cutting operation for the diagonally slotted container. Although it would be ideal if no perforations had to be used and a complete cut could be made for the diagonal slot, the triangular portion of the flap resulting from the diagonal die-cutting operation must be held in place so that the container can be folded along the vertical score lines without the triangular portion extending over the edge.

Conclusions

Because of the cost of the sleeve used with the regular slotted container, the diagonally slotted container without sleeve is clearly less costly.

Tables II and III show the size and price variations on three different types of containers. Although a price differential (per 1,000) ranging between \$58.55 and \$41.50 exists as the cost for a diagonally slotted container over that of a regular slotted container of the same board type and size, in actuality there is a net saving of \$117.68 per 1,000 when the sleeve is added into the total cost of the regular slotted container.

In addition to the potential monetary savings, elimination of a sleeve results in a material saving. Table IV gives the exact [Continued on page 207]

Table II: Size and price variations of the 24 No. 2½ can size containers

Container or sleeve interior dimensions (in.)	Blank size (in.)	Container style	Board type	Price per 1,000*
16½ x 12½ x 9¾	59¾ x 22½	RSC	V2s	\$383.70
16¾ x 12½ x 9¾	55¾ x 12¾	Sleeve	V2s	233.75
16¾ x 12½ x 9½	59¾ x 23½	DSC	V2s	442.25
16½ x 12½ x 9¾	58¾ x 21½	RSC	V3c	251.50
16¾ x 12½ x 10	55 x 12¾	Sleeve	V3c	167.40
16½ x 12½ x 9¾	59½ x 22½	DSC	V3c	298.20
16½ x 12½ x 9¾	58¾ x 21½	RSC	200 lb.†	119.50
16¾ x 12½ x 10	55 x 12¾	Sleeve	200 lb.	96.30
16½ x 12½ x 9¾	59½ x 22½	DSC	200 lb.	161.00

* Prices based on a minimum of 50,000 and are not current.

† "200" denotes 200-lb.-test corrugated fibreboard.

Table III: Size and price variations on the six No. 10 can size containers

Container or sleeve interior dimensions (in.)	Blank size (in.)	Container style	Board type	Price per 1,000*
18½ x 12½ x 7	64¾ x 20½	RSC	V2s	\$375.45
18½ x 12½ x 7½	55½ x 12¾	Sleeve	V2s	236.30
18½ x 12½ x 7½	64¾ x 21½	DSC	V2s	433.70
18½ x 12½ x 7	63¾ x 19½	RSC	V3c	246.25
18½ x 12½ x 7½	54¾ x 12¾	Sleeve	V3c	169.40
18½ x 12½ x 7	64½ x 20½	DSC	V3c	297.55
18½ x 12½ x 7	63¾ x 19½	RSC	200†	116.00
18½ x 12½ x 7½	54¾ x 12¾	Sleeve	200	97.15
18½ x 12½ x 7	64½ x 20½	DSC	200	166.75

* Prices based on a minimum of 50,000 and are not current.

† "200" denotes 200-lb.-test corrugated fibreboard.

Table IV: Comparing fibreboard requirements

Nominal container size*	Material	Container style or sleeve	Area of blank (sq. in.)	Increase DSC vs. RSC as base (%)	Decrease DSC vs. RSC and sleeve as base (%)
2½	Solid fibre	RSC	1,325	—	—
2½	Solid fibre	Sleeve	675	—	—
2½	Solid fibre	DSC	1,390	4.9	43.9
2½	Corrugated	RSC	1,286	—	—
2½	Corrugated	Sleeve	670	—	—
2½	Corrugated	DSC	1,359	5.7	44.0
10	Solid fibre	RSC	1,296	—	—
10	Solid fibre	Sleeve	684	—	—
10	Solid fibre	DSC	1,365	5.4	45.0
10	Corrugated	RSC	1,257	—	—
10	Corrugated	Sleeve	679	—	—
10	Corrugated	DSC	1,333	6.1	45.2

* 2½ denotes container for 24 No. 2½ size cans; 10 denotes container for six No. 10 size cans.

By R. J. Holmes* and A. C. Signore†

Testing for ultraviolet effect

Transparent film containing an ultraviolet absorber

will screen out UV rays while transmitting visible light; comparison shows effect on package and contents

The introduction of ultraviolet absorbers has created a need for a simple screening method to determine the effect of ultraviolet light upon a package or its contents. Quite often discoloration or degradation has been assumed to be the action of ultraviolet light, since the sample was exposed to a light source. To make proper use of the absorbers, it is necessary to know whether the problem is due specifically to the ultraviolet portion of light energy.

Optical filters are widely used to transmit specific wave lengths. However, most of them are not completely satisfactory, since no single one is effective in screening out all ultraviolet light without cutting

off visible light. A cellulose acetate film containing 1.5% of an ultraviolet absorber (UVINUL D-49) is available from the Dyestuff & Chemical Division of General Aniline & Film Corp. as a useful research tool. The film can be used to screen out ultraviolet light without affecting the transmission of visible light. The portion of ultraviolet radiation absorbed by this cellulose acetate filter is the darkened portion of Figure 1. The filter screens out light from 280 to 400 mμ, the range of ultraviolet radiation from solar energy. Placed between the light source and the test specimen, the film eliminates ultraviolet radiation.

Test method

The cellulose acetate film containing the ultraviolet absorber is used for the following test:

1. One sample is covered with the cellulose acetate-ultraviolet absorber filter for protection.
2. The protected and unprotected samples are placed side by side in a Fade-O-Meter, Weather-O-Meter or similar type of equipment. A third sample is stored in the dark.
3. The light source is activated.
4. The exposed, protected and stored samples are compared at the end of the test period.

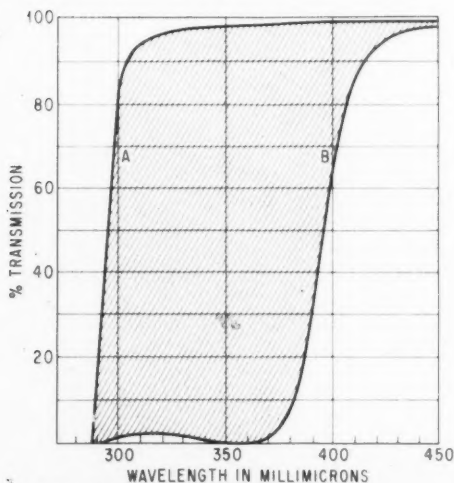
One sample may be used instead of the three. In this case, simply cover one portion with an opaque cover, cover a second portion with the filter and leave the remaining portion uncovered.

When liquids are to be tested, equal portions of the fluid are poured into clear glass bottles. Cover one bottle with the filter, leave the second bottle unprotected and store the third in the dark.

Results

Figures 2 and 3 present the results which were obtained in one study. One-third of a piece of pink fabric ("C" in Figure 2) was covered with the ultraviolet filter and another third ("A") was covered with an opaque lid before exposure to a light source;

Figure 1. Transmission of cellulose acetate film containing UVINUL D-49



A 1.2 MIL CELLULOSE ACETATE
B 1.2 MIL CELLULOSE ACETATE CONTAINING 1.5% UVINUL D-49

the discoloration of the dyestuff in "B" is due to the action of ultraviolet light.

The solution tested in bottles in Figure 3 also indicates that ultraviolet light contributes to the darkening process. However, since the samples covered with the filter ("B") also darkened slightly as compared with bottle "A" stored in the dark, it is evident that there are other factors to be considered. Bottle "C" was exposed to light without a screen.

Analogous results have been obtained with other systems. It has been found that woods with a dark-colored finish, such as cherry plywood, fade even when the filter screen is used. On the other hand, light-colored, naturally bleached woods do not discolor when ultraviolet radiation is screened out.

Applications for UV absorbers

Ultraviolet absorbers may be used either as optical filters or as stabilizers. When used as an optical filter, the absorber is incorporated into a protective coating or plastic film which is used to screen out ultraviolet radiation of the surface below it. The absorber may also be used as a stabilizer by incorporating it as an integral part of the formulation itself to prevent degradation.

It is not always possible to incorporate the absorber into the system which requires protection from ultraviolet radiation. For example, fluorescent pigments lose their intensity after short periods of exposure to ultraviolet light. Incorporating an absorber into the system is not so effective as application of a clear overcoat containing an absorber in extending the life of the pigment. This method is used in the preparation of light-stable labels containing fluorescent pigments for eye-appealing packages (1).¹ The technique may also be used to overcome compatibility problems. If the absorber is not compatible with a particular substrate such as polyethylene, an overcoat containing the absorber can then be applied to act as a protective screen preventing the transmission of ultraviolet light rays that are the cause of degradation.

The films used for this test method can also be used for the packaging of products which suffer from ultraviolet-light exposure. Optical brighteners, which make such products as men's shirts appear whiter, lose their effectiveness rapidly due to ultraviolet radiation. Packaging these shirts in films containing an ultraviolet absorber will insure a longer life to the optical brightener so that the customer will get a whiter shirt. Such packaging will counteract the effect of small, but measurable amounts of ultraviolet light emitted by fluorescent lights generally used for retail-store lighting, as well as for cases used to display the product packages.

¹Numbers in parentheses identify References appended.

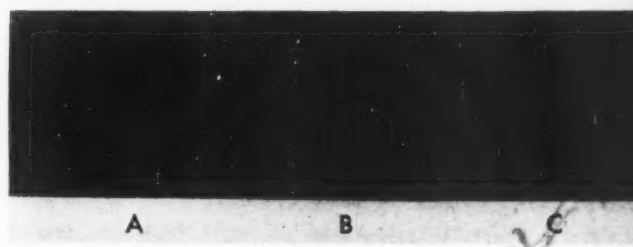


Figure 2. Pink cloth exposed (A) with an opaque covering; (B) without ultraviolet screen; (C) with ultraviolet screen composed of cellulose acetate film incorporating an ultraviolet absorber.

Many colored cosmetic solutions and household-cleaning compounds packaged in clear containers suffer adversely from ultraviolet light. Incorporation of the absorber into the plastic container or in an overcoat on a glass bottle will prevent this. In some instances, the absorber can be added directly to the solution as an integral part of the formulation and protection is obtained. Advantage is taken of this to protect certain dyestuffs and chemicals used in hair brilliantines (2), general-purpose cleaners and various other products.

The absorbers have also been found useful as stabilizers for cellulose nitrate and polyvinyl chloride films. The addition of ultraviolet absorbers such as UVINUL D-49 to conventionally stabilized clear and pigmented polyvinyl chloride formulations improves the light stability of the films. More recently, a new type of absorber described as a substituted acrylonitrile (UVINUL N-35) was found to protect nitrocellulose lacquers against the deleterious effect of ultraviolet light rays without contributing any adverse color to the coatings.

References

1. Switzer, Joseph L., et al. U. S. Patent 2,653,109 (1953).
2. Fox, Lawrence, et al. U. S. Patent 2,678,901 (1954).

Figure 3. Results on a liquid product, (A) stored in the dark, (B) exposed to light with ultraviolet screen and (C) exposed to light with no ultraviolet screen.



Questions & Answers

This consultation service on technical and engineering packaging subjects is at your command. Simply address your questions to Technical Dept., Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Skin-packaging techniques

Q: *We are having trouble with a skin package that is formed from a vinyl film and a vinyl-coated board. The film cracks during cold weather and the package also gives off an unpleasant odor. What can we do about these problems?*

A: These are very common problems and they stem from the plasticizer used in the film. Vinyl film can have good low-temperature durability with the proper plasticizer, but you must specify such a film to your supplier—and it will probably cost you a little more than the film you are using at present. A change in plasticizer will probably cure the problem of off-odor, too. In vinyl skin packs, the board coating is critical. You should consult closely with your supplier to obtain a coating that is compatible with the film.

If you are seriously studying the whole skin-packaging situation, there is another technique that you might want to investigate: a continuous skin-type packaging line, which utilizes roll-stock vinyl and individual dies to form folder or single-face packages with products of moderate thickness. Other materials are available for skin packaging which eliminate the need for coated and perforated boards. One is a polyethylene-coated acetate film that is available in 1- to 10-mil thicknesses and is very durable and transparent. Another package uses a polyethylene-coated polyester film, which is strong and thus useful for heavy or sharp-edged products.

Sift-preventive carton

Q: *We have a sifting problem with one of our products packed in a folding paperboard carton. The product is a coarse powder, non-hygroscopic and quite dense. It is packaged in 2-lb. units in a carton with full glued flaps. The carton stock is of extra thickness to reduce*

panel bulging and we check the carton shipments for their mechanical quality and dimension. Our carton-filling line is quite new and well adjusted. The amount of sifting is generally very small, but because of the hardness of the product the result is abrasion of the printed surface. In long shipments, this can seriously affect the appearance of the package. Can you suggest a carton construction or modification that will reduce or eliminate this sifting?

A: It would appear that you have taken all the steps and precautions necessary to make your present carton as siftproof as is mechanically possible for a regular full-flap construction. The density and free-flowing character of your product, together with shocks from shipping and handling, are subjecting the end seals to severe stresses. The result of this repeated action is to force the product into the end seals and finally to force some of it out of the carton. This effect on the carton can be reduced in some degree by having a tight fit of the cartons in the shipping case and by the use of a stronger shipping case.

A proven and practical siftproof carton design is the so-called "Van Buren" ear construction. This type of carton end seal has been used for many years to reduce sifting in cartons used for soap powder. The Van Buren ear is a flap extension which is glued down along the side panels. This added ear prevents the top seal from buckling or lifting under load and also is an additional barrier to product sifting. It will be necessary to modify your carton line to glue, fold and properly compress this type of carton. However, this is a standard line modification which can be performed quite easily.

The combination of a strong, tightly fitting shipping case and the Van Buren ear carton should minimize your sifting problem.

Uprighting plastic bottles

Q: *We have built our own unscrambler for polyethylene bottles, but are having a great deal of trouble keeping these light containers upright. Can you tell us what other users of polyethylene bottles are doing to prevent tipping of these lightweight containers and to increase line speeds in plastic packaging?*

A: Most packagers with whom we are acquainted are using one of the three commercial unscramblers for polyethylene bottles that are now on the market and have pretty well solved the problem of moving light plastic bottles at speeds up to 150 per minute. All of these machines use different techniques to align the bottles, but they do have one point in common: They closely confine the bottle at the point where it is placed on the moving conveyor and accelerated to line speed.

You gave no details as to what type of unscrambling device you employ, but there are several mechanical techniques that could be incorporated in almost any type of machine to help you maintain control of the bottles.

Air jets are the most common control device. A tiny blast of compressed air, focused on the upper part of the bottle at the point of acceleration, can be adjusted to balance exactly the forces tending to tip the container. Another measure, recently perfected, is the use of nylon brush side rails that hold the bottle under constant pressure. To use this technique, the bottles must be pushed through the rail area with a positive feed device. Still another method of handling is vacuum belts. Here, the base conveyor belt contains many little holes and is located over a vacuum chamber. The bottles are firmly gripped by the suction and could even be moved diagonally from one belt to another one of faster speed to ease acceleration.



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Plants & People



Stefan

Fred M. Stefan has been elected pres. and a director of Milprint, Inc., Milwaukee. He was formerly exec. v.p. of the Marbon Chemical Div. of Borg-Warner Corp. The division specializes in high-impact thermosetting resins for calendering and extruding operations. Russell Diefenbach has been named gen. mgr. of Milprint's rotogravure carton plant in Downingtown, Pa. He was formerly sales mgr. for the carton division.

After eight years as chief exec. of Fibreboard Paper Products Corp., San Francisco, William L. Keady has retired. E. W. Carey, former v.p. of marketing, has been elected pres. and chief exec. officer to succeed him. Mr. Keady will continue as a director and will be in charge of the company's foreign operations. Mr. Carey, who joined Fibreboard in 1957 as v.p. of administration, was named v.p. of mktg. last year.

Rexall Drug & Chemical Co., Los Angeles, now manufacturing and marketing plastics film from three facilities, has organized a national film div. to coordinate its activities in this field. Horton Conrad has been named national gen. mgr. of the div.; Jack De Caprio becomes national gen. sales mgr., and Joseph H. Gauss is sales mgr., national accounts. The three Rexall facilities producing plastics film are TuRex Plastics, Nasonville, R. I.; Chippewa Plastics, Chippewa Falls, Wis., and Santa Ana Film, Santa Ana, Calif.

Rexall Chemical Co. and El Paso Natural Gas Products Co. have launched a joint venture for the production and sale of petrochemicals. The two companies report plans to construct olefin and polyolefin plants in Odessa, Tex. Also planned as a joint venture is the construction of research-laboratory and office facilities in Paramus, N.J. They will be used to supplement the new Odessa operations.

Osgood V. Tracy is newly elected director and exec. v.p. of W. R. Grace & Co., New York. Mr. Tracy, who succeeds the late Marlin G. Geiger, will be in charge of the chemical business of Grace and will be responsible for the company's seven operating divisions as well as the Research Div. Mr. Tracy takes over his new position after retiring as pres. of Esso Standard, div. Humble Oil & Refining Company.

A new plant for the production of thin-wall plastic containers and other packaging products has been built by the Conex Div., Illinois Tool Works, Chicago. Among the plastic products to

be made at the plant are dairy containers, vending cups, containers for general household purposes and a can carrier for food and beverage products. The plant is in Des Plaines, Ill.

Bernard F. Agnelli has been appointed public-relations director and Willys D. DeVoll industrial-relations director of Diamond National Corp., New York. Mr. Agnelli succeeds Dean K. Phillips, who died June 5. In March, 1958, as Mr. Phillips' asst., he helped organize Diamond's public-relations dept. Mr. DeVoll has served as director of industrial relations for the company's molded-packaging div. for the past two years. He joined Gardner in 1954.

J. T. Haskell has joined F. L. Burt Co. as sales mgr. He was formerly a manufacturers' representative. The San Francisco company makes packaging and bottling machinery.

A new plastic-container manufacturing plant, designed to service the requirements of Western packagers of household chemicals, cosmetics and pharmaceuticals, is being built at Anaheim, Calif., by Plax Corp., Hartford. The plant will manufacture Plax's complete line of plastics packages. Owned jointly by Monsanto Chemical Co. and Emhart Mfg. Co., Plax also has a plant under construction at Cincinnati.

The Hazel-Atlas Glass Div. of Continental Can Co., New York, has appointed R. S. Long as gen. mgr. of glass-container sales. Mr. Long, who



Long Hanle

will be headquartered in Wheeling, W. Va., was formerly mgr. of field sales operations for Hazel-Atlas. Prior to that he was new products mgr. for the Glass & Plastics Group. Dr. John E. Hanle has been appointed associate director of research in high-polymer chemistry at the Central Research and Engineering Div. of Continental Can Co. He will direct long-range fundamental applied research in basic polymers, coatings, inks, plastic converting and sealing materials.

James K. Cooper is new district sales mgr. for metal cans in Atlanta, Ga. He is succeeded as product sales mgr. in New York for non-processed food, meat and coffee cans by P. N. Smith.

Spencer Chemical Co., Kansas City, Mo., has announced several new executive assignments. Frank Pyle is now v.p. and asst. to the pres. His former

responsibilities as v.p. of plastics have been assumed by Harold Dinges, former v.p. of industrial chemicals. Mr. Dinges heads plastics sales and related activities. As new v.p. of administration, E. V. Friedrich will direct activities of the Plastics Division.

The appointment of Robert Mitchell to the development staff of the General Foods Packaging Laboratory has been announced by General Foods Corp., White Plains, N. Y. Mr. Mitchell was formerly director of engineering with Donald Deskey Associates, industrial designer. In his new post at the Tarrytown, N. Y., laboratory, he will serve as a project leader.



Buckley

Christopher H. Buckley has become v.p. and director of sales and marketing for Knox Glass, Inc., Knox, Pa., manufacturer of glass containers. He was formerly gen. mgr. of the Aluminum Container Div. of Kaiser Aluminum & Chemical Corp. Mr. Buckley was also previously associated with Continental Can Co. as national product sales mgr. in charge of beer and beverage sales.

Facilities to produce polyethylene foam will be constructed at the Ironton, O., plant of The Dow Chemical Co., Midland, Mich. The new chemical plant is scheduled to begin operations next June. It will produce Ethafoam, Dow's new polyethylene foam which is suggested for use in package cushioning, insulation and other industrial and consumer applications. The flexible foam, of closed-cell structure, is reported to be 30 times lighter than water.

New gen. sales mgr. of Holyoke Plastics Co., Holyoke, Mass., is Lawrence F. Shannon. Mr. Shannon, with the company for three years, was formerly with American Cyanamid Co. He also ran his own manufacturers' representative agency. Holyoke Plastics does custom molding of components for the automotive and electronic industries.

H. S. Crocker Co. has purchased the Strobridge Lithographing Co. of Cincinnati. No changes in Strobridge management, personnel or policies are contemplated. Established in 1847, Strobridge is one of the oldest lithographing companies in the U. S. James G. Strobridge is chairman.

Ralph B. Wentzel, formerly v.p. in charge of sales, has been advanced to v.p. in charge of operations for Wheaton Glass Co., Millville, N. J. Mr. Wentzel has been with the company



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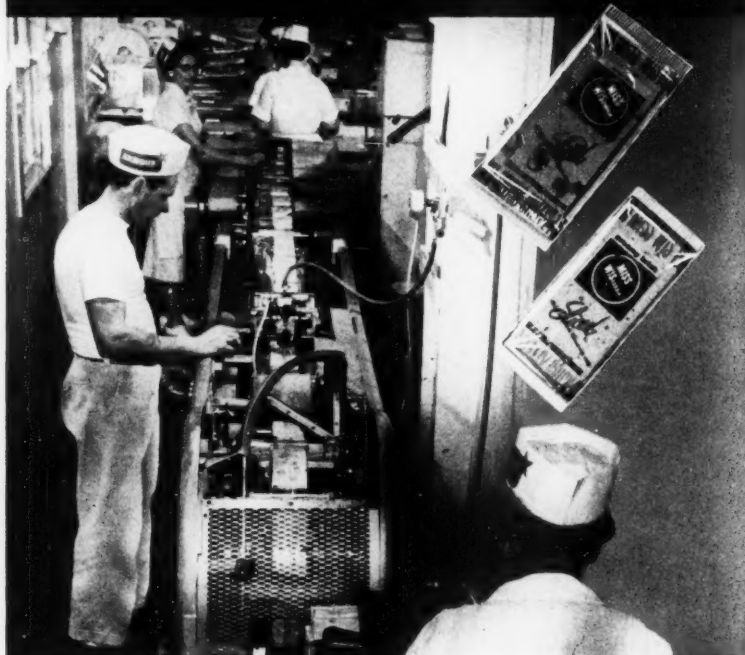
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Plants & People [Cont'd]

since 1941. Harry Cowperthwaite becomes v.p. of sales. His former position as New York regional sales div. mgr. has been taken by Roy S. Brown, Jr.

Stanley G. Ellis has been appointed Eastern regional mgr. of bakery-packaging sales for Marathon, Div. American Can Co., Menasha, Wis. He succeeds Theodore J. Süess, now Southern regional mgr. Dean Bartosic has taken over Mr. Ellis' former post as asst. to the bakery-packaging sales mgr. at Marathon's Menasha headquarters.

Dr. A. W. Fisher, Jr. has been appointed exec. v.p. and Dr. H. H. Reynolds



Fisher Reynolds

named v.p. of research and development for both Ludlow Papers and Ludlow Plastics, divs. of Ludlow Corp., Needham Heights, Mass.

In his newly created position, Dr. Fisher will direct all operations of both divs. Dr. Reynolds is now responsible for technical programs in both divs., including quality control and technical services. He was formerly director of research for Ludlow Papers.

The purchase of two manufacturing companies and the formation of a new operating group to produce packaging materials has been announced by Sun Chemical Corp., New York. Artistic Mfg. Co., Stamford, Conn. (decorative packaging materials) and Dyna-Foam Corp., Ellenville, N. Y. (foam thermoplastic films) have been integrated with Sun's Facile and Electro-Tech divs. to form a new management unit, designated Packaging Materials Group, under the direction of Eugene Jacobson, newly elected v.p. of the corporation.

Thomas C. Butcher has joined Jim Nash Associates, Inc., New York, as chairman of the board and chief exec. officer. He was formerly pres. of Brown & Butcher, Inc., and prior to that exec. v.p. of Lennen & Newell. Eric Teran continues as pres. and Gerald Frisch as exec. v.p. of the industrial-design firm.

United Container Co. has acquired Bicking Paper Mills of Downingtown, Pa., and will operate it as a div. Frank J. Keating, with United Container for 14 years, has been named v.p. of the new div. Donald A. Cumfer will serve as gen. mgr. of Bicking.

Richard W. Dando is new v.p. and gen. mgr. of Sun Chemical Corp.'s General Printing Ink Div., East. Included in the div. are the New England, Middle Atlantic and Southeastern territories. Mr. Dando, who continues as v.p. and gen. mgr. of the Geo. H. Morrill Div., has been with Sun for 25 years.

Sun Chemical also has a new printing-ink plant at 2150 Hunter St. in Los

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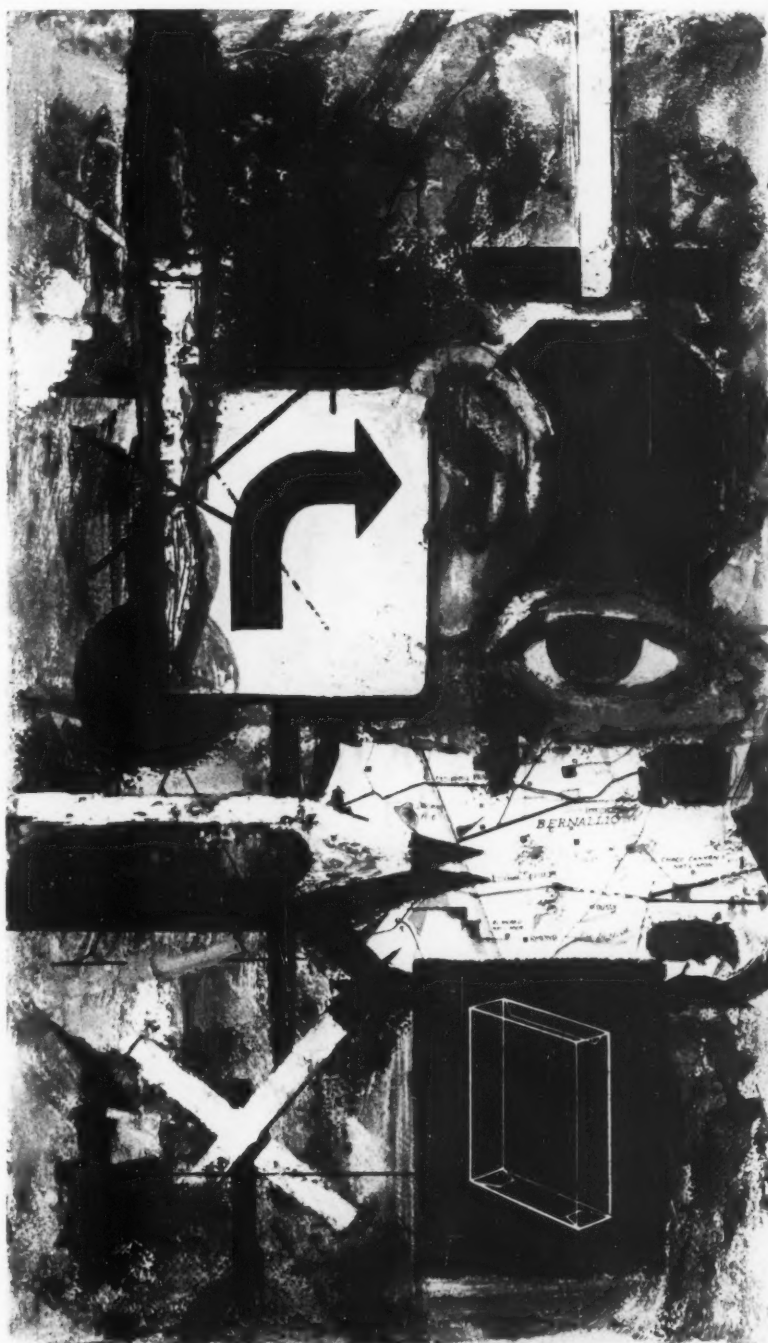
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Makes sure your package is tested right. He's the one who makes sure your package is tested to the limit.

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it's creativity with a road map—research visually interpreted—a design by design for greater sales. At Gardner, package design is both a flight of fancy and a hard-nosed approach to sales. Graphic Design provides the imagination, Market Research the direction and purpose. ¶ Before a Gardner Graphic Designer starts your layout, he studies all the product and market information prepared by Research. He gets to know your customers, their preferences, and the seemingly insignificant factors that motivate their buying habits. He learns your market, too. His design recommendations will show it. The end result is an effective selling idea—a market-oriented Persuasive Package. ¶ Isn't package design too important a part of your sales picture to be left to an artist's creative whim? Why not find out more about Persuasive Packaging—the most resourceful, completely coordinated packaging program in the industry?



DIAMOND NATIONAL
THE GARDNER DIVISION
MIDDLETOWN, OHIO



EXAMPLE OF GARDNER PERSUASIVE PACKAGING

Here's a carton that reaches out to grab you if you're even a little bit hungry for ice cream. Like it? It's an economical Gardner stock design—and what's more it **sells**. ¶ This particular carton, created by Gardner Graphic Design, is just one of a line of one, two, and full-color pictorial stock cartons available to large and small ice cream producers alike. ¶ All cartons, whether stock or special design, are produced by the same Gardner Creative Group that walked off with top honors in the '60 Folding Carton Competition. ¶ Prize-winning Persuasive Packaging is available in paraffin cartons for the butter, margarine, and meat industries, too.



DIAMOND NATIONAL
THE GARDNER DIVISION



Plants & People [Cont'd]

Angeles. The 27,000-sq.-ft. facility is being managed by A. E. Cottril. According to the company, it is one of the nation's most automated printing ink plants.

William J. Egan, Pacific Coast v.p. of the General Printing Ink Div., was honored recently on the occasion of his 50th year of service with the company.

Automatic packaging of cologne and perfume in glass aerosol containers is under way on the newly completed assembly line recently installed by G. Barr & Co., Chicago. The line, geared to operate at 120 units per minute, can be adjusted for minimum quantity runs.

Delaware Barrel & Drum Co., Wilmington, has begun expansion of its production and warehousing facilities for molded polyethylene drums and tanks. The company recently opened a sales office in Los Angeles.

A new aerosol-production department reportedly employing the latest in aerosol loading and packaging equipment is now in operation at Thomasson of Pa., Inc., Norristown, Pa. Pressure filling machinery has been installed.

Hinde & Dauch, Sandusky, O., corrugated-box-making div. of West Virginia Pulp & Paper Co., has opened a sales office in New York City. Graham Davis is in charge.



Johnson

New director of graphic arts at KVP Sutherland Paper Co., Kalamazoo, Mich., is Roy H. Johnson. Mr. Johnson joined the former Sutherland Paper Co. in 1953 and became director of graphic arts in 1957. Now in charge of all art activities of the company, he will direct the expanded design dept., which is devoted to the development of creative package design for customers.

Al Abrahams has been promoted from mgr. of the central mold and engineering div. to gen. mgr. of Thatcher Glass Mfg. Co.'s mold-making div. Neal Galusha will assist Mr. Abrahams. Ed Pettingill is new mgr. of sales engineering and is also in charge of the creative-design dept. In his new capacity, Mr. Abrahams, who has been with Thatcher since 1944, will supervise activities of The Toledo Mould Co., The Central Mold Shop and Mold Engineering.

Jim Groome becomes district mgr. in North and South Carolina, responsible for the folding carton, Bottle Master carry-home carton and automatic packaging lines of Mead Packaging, Div. of The Mead Corp., Atlanta. Joe Brock is new St. Louis district mgr. for the same Mead products. The sale of bottle carrier, folding cartons and multiple packaging in Michigan, northern Indiana and Ohio now is being handled by Jerry Tenney, Detroit.

John R. Morehead has become mgr. of new-product development, a newly created position in the Glass Container Div. of Owens-Illinois Glass Co., Toledo. Har-



Morehead Rairdon

old Ottesen has succeeded him as mgr. of the Charleston plant. Mervyn M. Jenkins has taken over Mr. Ottesen's former duties as mgr. of O-I's Atlanta plant. Smith L. Rairdon has been elected exec. v.p. of O-I. He will continue to be responsible for marketing administration, purchasing, public relations, traffic, advertising, market development and trade relations. Mr. Rairdon has been with the company since 1924.

Allied Chemical's General Chemical Div. is building a plant in Elizabeth, N. J., to produce the "Genetron" line of fluorinated hydrocarbon refrigerants and aerosol propellants. The new facility reportedly will increase the div.'s over-all capacity by more than one third.

Eastman Chemical Products, Inc., Kingsport, Tenn., marketing organization for Eastman Kodak Co.'s manufacturing divs., has been expanded with the establishment of an International Div. The new div. will be responsible for overseas sales and service of fibres, chemicals and plastics produced by Tennessee Eastman Co. and Texas Eastman Company.

Eugene Di Scala has been named art director, packaging, for Shulton, Inc., New York. He will be in charge of packaging design for the company's domestic and international divs.

In his new capacity as gen. mgr. of the dairy div. of Crown Cork & Seal Co., Philadelphia, Herbert A. Reiger will be responsible for the sale of the company's P-38 Dacro milk cap. In addition, he will coordinate service activities on the company's line of milk-filling equipment. Mr. Reiger, who joined Crown in 1955, has been associated with the packaging industry for 20 years.

N & N Plastic Extruders Corp., Wentzville, Mo., has been acquired by Extrudo Film Corp., Long Island City, N. Y. This fifth step in a long-range expansion program reportedly gives Extrudo Film an annual polyethylene-film production capacity in excess of 20 million lbs. Executive, sales and manufacturing staff of the Wentzville plant are being retained. Ronald Newton will continue as production manager.

Willis Kirkpatrick has been promoted to acting mgr. of the Carolina Div. of The Champion Paper & Fibre Co., Hamilton, O. The move follows the retirement of A. M. Fairbrother as v.p. and mgr. of the div. Mr. Kirkpatrick's most recent post was that of asst. division mgr. Mr. Fairbrother, a veteran of 25 years with the company, had [Continued on page 159]

BRAUN

a bottle by...



THE ROUND CONICAL

8-ounces
16-ounces

GLASS AND PLASTIC
BOTTLES AND CAPS
SINCE 1909

W. BRAUN CO.

CHICAGO 6, ILL. 300 N. Canal Street
KAndolph 6-5633

NEW YORK, N. Y. 47 West 34th Street
LOngacre 3-2262

ST. PAUL, MINN. 1835 University Ave.
Midway 4-3531

Write for our free catalogue

COM

Du Pont's new **2_{in}1** polyethylene gives you clarity and toughness in a single film

This is it! The polyethylene film specifically designed for bag packaging that gives you both clarity and toughness . . . Du Pont's exclusive new 2-in-1 polyethylene film.

Compare it with the clearest polyethylene bag films you can buy today. You'll find it's just as clear. Compare it with the tough polyethylene bag films. You'll find that only the hazy, high-impact polyethylene films are as rugged.

Where can you get it? Du Pont 2-in-1 polyethylene film is now available in printed roll stock and bags through Du Pont Authorized

Converters . . . or plain roll stock from your Du Pont Representative. Call an Authorized Converter or Du Pont Representative for all the facts on this latest advance from Du Pont . . . leader in packaging film for 35 years. Du Pont Company, Film Dept., Wilmington 98, Del.



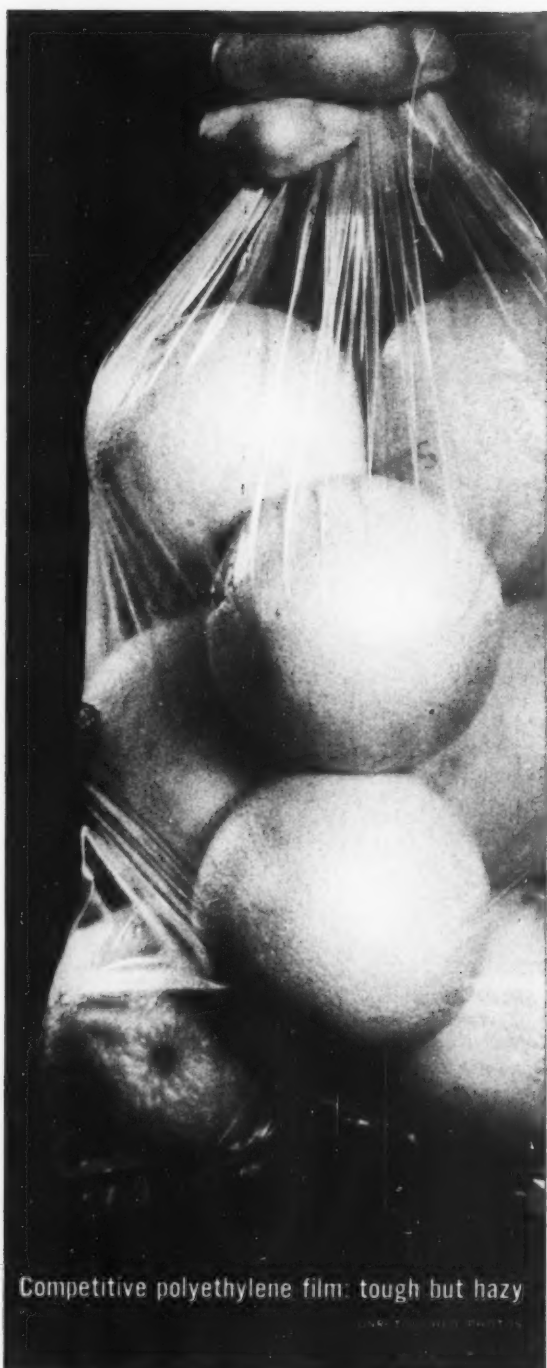
Better Things for Better Living
... through Chemistry



PARE



Du Pont's new 2-in-1 polyethylene film: both tough and clear



Competitive polyethylene film: tough but hazy



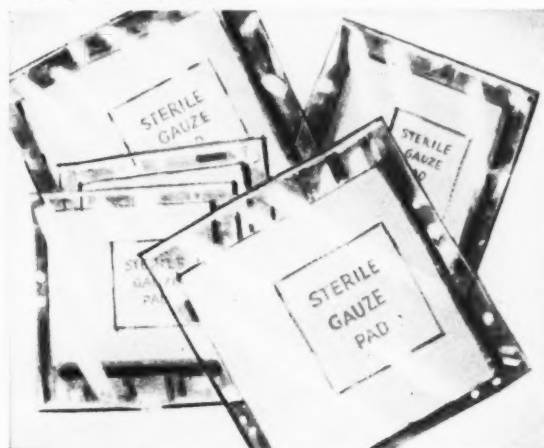
Sealed-in freshness! Escon polypropylene, brilliant see-through wrapping, helps seal in freshness thanks to its low moisture vapor transmission. Its excellent handling qualities make it ideal for high-speed packaging.



Good show! Escon clear packaging film shows the product at its natural best. Since it can be color printed on either or both sides, Escon provides an opportunity for attractive packaging design of many items.



Long shelf life! When used as an overwrap, Escon contributes to long shelf life of candy, cookies, cigarettes and other semi-perishable products. Its brilliant transparency adds eye-and-buy appeal.



Heat resistance! Escon-packaged gauze pads and other medical dressings can be sterilized by autoclaving. Can Escon's high heat resistance give you the opportunity to add "sterile" to your product label?

Escon[®] POLYPROPYLENE for film of greater eye-and-buy appeal

Film made of Escon polypropylene can give your product maximum sales appeal. Its extreme clarity, uniform quality and high surface gloss can add new sparkle to your package. Escon can be extruded into film using either the water bath or chill roll technique. It offers good vapor barrier properties plus greater heat

resistance than any other polyolefin. In addition, Escon exhibits a wide heat sealing range and the degree of seal can be varied from a light tack to a strong weld. For complete information, contact the nearest Enjay office. *Home Office:* 15 West 51st Street, New York 19, New York. *Other Offices:* Akron • Boston

Charlotte • Chicago • Detroit
Houston • Los Angeles • New
Orleans • Plainfield, N. J. • Tulsa

EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY CHEMICAL COMPANY

A DIVISION OF HUMBLE OIL & REFINING COMPANY



Johnny Unitas demonstrates newest H&W high-strength packaging paper ...

EXPANDA-KRAFT

THE GREAT NEW NAME IN EXTENSIBLE KRAFT



THIS AD IS PRINTED ON EXPANDA-KRAFT WHITE

You can also buy Expanda-Kraft

in Semi-Bleached or Natural. See how nicely it prints on

high-speed presses. Visualize the attractiveness of Expanda-Kraft packaging.

Now, consider how well this tough, rigid paper will perform on converting equipment ...



EXPANDA-KRAFT

DEFIES SHOCK!




EXPANDA-KRAFT REDUCES BREAKAGE It has *two-way stretch*, soaks up shocks that would break ordinary kraft of equal basis weight.

EXPANDA-KRAFT WITHSTANDS MOISTURE *High humidity and weathering* have little effect on Expanda-Kraft! It retains its full toughness and firmness.

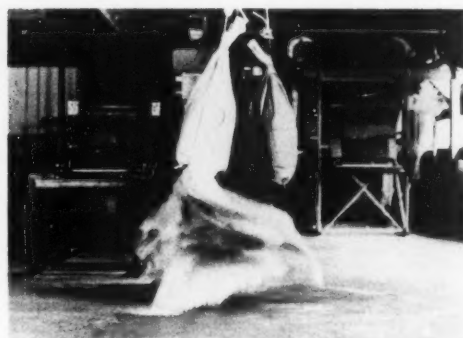
EXPANDA-KRAFT PRINTS SHARP This advertisement is printed on 50-lb. Expanda-Kraft White from a regular production run. Other shades print as well to enhance sales appeal.

EXPANDA-KRAFT BAGS STACK SECURELY They have a coefficient of friction higher than regular kraft bags, stack with less risk of slippage, stay in place while in transit.

EXPANDA-KRAFT BAGS FILL FAST They meet required porosity standards, yet are rigid enough to stand up to high speeds on the filling line.

HOLLINGSWORTH & WHITNEY DIVISION OF
 **SCOTT PAPER COMPANY**

The bullet passes of Johnny Unitas have the terrific impact to rip through regular kraft (above), yet, thrown at the same speed, they bounce off Expanda-Kraft because of its greater resiliency (left). Johnny Unitas, all-pro quarterback of the Baltimore Colts, demonstrated the toughness of Expanda-Kraft at the National Packaging Show in Atlantic City. Each target consisted of four plies of 50-lb. basis weight stock. Time after time, in standard drop tests, bags made of Expanda-Kraft have proved their superior strength.



Expanda-Kraft is the winner in impact test against regular kraft. Bags of each type were filled with sand, suspended on long ropes, sent hurtling toward each other. Regular kraft bag, photographed at high-speed as it burst, had same ply construction as Expanda-Kraft bag.

CONTACT YOUR SUPPLIER for information on the use of Expanda-Kraft for bags, wrappers, laminations, protective packaging or any use where outstanding strength is important. Expanda-Kraft is made by a new roll-crepe process. It's available in 40, 50, 60, 70 and 80-lb. basis weights; White, Semi-bleached or Natural. *Hollingsworth & Whitney, Division of Scott Paper Company, Dept. E, Chester, Pa.*

Plants & People

[Continued from page 153]

headed the Carolina Div. since 1958. Dana Pratt, director of export sales for the company, has retired after serving with Champion for more than 23 years. He was also pres. of Champion Paper Export Corp. and Champion Paper Corp., S. A. He had been active in the National Paper Trade Assn. and the American Paper & Pulp Association.



Black

The appointment of Alexander Black as mgr. of the Canco Div.'s marketing div. has been announced by Robert C. Stolk, v.p. in charge of sales for the Canco Div. of American Can Co., New York. Mr. Black was formerly headquartered in San Francisco as Western sales manager.

Alvin W. Keeshan has joined Champlain Co., Roseland, N. J., as sales engineer in charge of the company's newly created specialty-sales dept. Work of the new set-up, established to provide application engineering service for many items in Champlain's line of converting equipment, will include analysis of production requirements, assistance in selection of appropriate equipment and supervision of its installation and initial operation. Mr. Keeshan is a member of the Gravure Technical Assn. and the Technical Assn. of Graphic Arts.

D. C. Stahle has been named mgr. of dairy packaging for the Western-Waxide Div., Crown Zellerbach Corp., San Francisco. Mr. Stahle was formerly mgr. of Tetra Pak packaging for Crown Zellerbach.

Packaging Corp. of America has purchased a 300,000-sq.-ft. former H. J. Heinz & Co. plant in Berkeley, Calif., for \$1.8 million. The facility is to be used for the manufacture of molded-pulp egg cartons, produce trays and other molded-pulp packaging materials. Operations at the newly acquired plant, due to begin in late 1961, will boost Packaging Corp.'s output of molded-pulp products by one-third.

Charles M. Lamb, Jr., has been appointed to the newly created post of mgr. of market development at Westfield River Paper Co., Russell, Mass. For the past 22 years, Mr. Lamb served with U. S. Envelope Co., most recently as mgr. of the Kellogg Container Div. Westfield River Paper Co. makes glassine, greaseproof and laminated papers for packaging.

Following acquisition by Interstate Container Corp., Glendale, L. I., The Guilford Folding Box Co. of Baltimore will henceforth be known as the Guilford Folding Box Co., Div. Interstate Container Corp. Guilford makes folding cartons. Harold Thomann, v.p. in charge of Interstate folding-carton pro-

[Continued on page 162]



RESINA

fully automatic

INNERSEALERS

automatically sorts, feeds
and applies up to 120 or more
innerseals per minute!



VERSATILITY—Can be installed in existing lines with all standard filling machines.

FLEXIBILITY—Handles a wide variety of containers and lids—from ½ pint to two gallons. Lid range from ½" to 1½" diameter.

SIMPLICITY—No change of parts required for container changeover. Universal timing unit automatically indexes your entire container range.

MAINTENANCE—No skilled help necessary for maintenance or changeover of innerseal sizes.

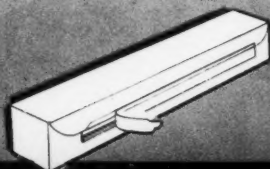


Descriptive literature and specifications on request.

RESINA

AUTOMATIC MACHINERY COMPANY, INC.
572 SMITH STREET BROOKLYN 31, N. Y.
Agents in Principal Cities





**FOIL BONDING . . . ANOTHER WAY
THERMOGRIP ADHESIVES HELP
SOLVE PACKAGING PROBLEMS.**



The long seam of this foil plant bag is sealed by THERMOGRIP to provide a flexible, waterproof joint.



THERMOGRIP applicators mounted on standard cartoning equipment made it possible to replace hand closing of this foil package with automatic carton sealing.



THERMOGRIP® ADHESIVES

Bond Foil at Higher Speeds

THERMOGRIP adhesives provide instant bonds on foil. There is no waiting for drying of the adhesive; pressure stations are eliminated, and machines can be operated at higher speeds. The simple design of the applicator and adhesive system makes installation easy on many types of packaging and converting machines. Glue pot cleaning is eliminated.

THERMOGRIP adhesives can be applied at top machine speeds in dots, dashes or continuous bands in a variety of widths. In addition to foil, plain boards, waxed boards, porous paper, polyethylene and many other materials are readily bonded.

If you are interested in clean, dry, high-speed sealing send us samples of your packages or product. Write us explaining your sealing objectives.



THERMOGRIP adhesive made possible faster production, surer bonds and better performance of this new tear strip Kaiser Foil package.

United

UNITED SHOE MACHINERY CORP.
140 Federal Street, Boston, Mass.
Liberty 2-9100

ENGINEERING

*for the Converting
and Packaging Industry*

- ANALYSIS OF PRESENT OPERATIONS
- REPORTS AND RECOMMENDATIONS
- PROCESS STUDIES
- PLANS AND SPECIFICATIONS
 - plant rearrangements
 - plant extensions
 - new plants

CHAS. T. MAIN, INC.

80 FEDERAL ST., BOSTON, MASSACHUSETTS
129 WEST TRADE ST., CHARLOTTE, NORTH CAROLINA

Saves its cost in months!

**NEW MOSSTYPE
"MOUNTER-
PROOFER"**



Rubber Plate Set-Up and Proofing Machine

Increase printing press productivity by *preproofing* every job — in color — before you place it on the press. The "Mounter-Proofing" enables you to mount rubber plates on cylinders faster, more accurately — and, simultaneously, to take composite or progressive proofs under press-related impression squeeze. Saves precious press-time, costly stock and ink — provides new control over quality.



MOSSTYPE and MOUNTER-PROOFER
are registered trademarks

Write for new
"Mounter-Proofing" Bulletin

MOSSTYPE

2 plants at your service / Waldwick, New Jersey
Elk Grove, Illinois

PROVEN!

THE

All-Purpose PACKAGE SEALER

SEALS:

- ACETATE
- VINYL
- SARANS
- POLYETHYLENE
- COATED BOARD
- COATED FABRICS
- COATED METAL
- AND COMBINATIONS!

FOR:

- BLISTER PACKAGING
- DISPLAY BOXES
- SPECIALTY PACKAGING
- PROTECTIVE COVERS
- ANY SIZE
- ANY SHAPE
- NO SKILLED HELP NEEDED
- SEALING TIME... JUST SECONDS

**KABAR OFFERS YOU
15 YEARS OF KNOW-HOW**

in Sealing
All Types of

Materials

...for Every Conceivable Purpose

MAKE US SHOW YOU!

Hand over your sealing Problems! Send particulars for
our recommendation. Of course, NO OBLIGATION.

The Better You Seal... The Easier You Sell!



MANUFACTURING CORPORATION

180-B Babylon Turnpike, Roosevelt, L. I., N. Y.

Freeport 9-4900

Plants & People

[Continued from page 159]

duction, and Frank Irsch, Interstate v.p. in charge of folding-carton sales, will head operations of Guilford.



Thompson

M. Stafford Thompson becomes director of new-product development for the market-development dept. of Celanese Polymer Co., div. Celanese Corp. of America, New York. He will be responsible for over-all merchandising programs and field contacts in the commercial development of new basic polymers and also of plastic molding compounds.

William R. Moffitt is newly appointed senior v.p. for mfg. and engineering of The Borden Chemical Co., div. The Borden Co., New York. With the company since 1938, Mr. Moffitt helped start Borden's first resin-production plant in 1939. Since 1954, he has served as v.p. and technical director of The Borden Chemical Co. Samuel Loshaek has been named director of product development for Borden Chemical. He was formerly head of the thermoplastics laboratory.

Fasson Products, Painesville, O., has named Charles J. Brusso as asst. merchant sales mgr. He will assist in the development of sales activities in the graphic-arts field. Fasson is a supplier of self-adhesive papers, foils and films.

The New York City corrugated sales district has been discontinued and its territory added to the Teterboro, N. J., sales district, according to Continental Can Co.'s Fibre Drum & Corrugated Box Div. J. W. Mesman, formerly in charge of the New York district, now holds a similar position in Philadelphia. The newly created post of corrugated box sales mgr. for national accounts has been assumed by D. G. Thomas. Concan's Boxboard & Folding Carton Div. has opened a new district sales office for folding cartons in Cincinnati. Jack A. Rogers has been appointed mgr. of the office, at 1014 Vine Street.

Walter A. Spies, Jr., has been named mgr. of sales and engineering of the Wagner Div. of National-Standard Co., Secaucus, N. J. Mr. Spies joined the company in 1946. Wagner makes metal-container decorating equipment.

Luba Tavor, package designer, is offering a new service of rendering comprehensives in embossed foil. Called AID, the service includes various techniques for raised and indented impressions. Three-dimensional models can be supplied in embossed foil for the decoration of metal containers simulating later manufactured samples. The service is available through Miss Tavor's studio at 1393 Sixth Ave., New York.

Western Kraft Corp., Portland, Ore., has taken over operation of two paper mills and three corrugated container

plants in California on 10-year leases. Now under Western Kraft's jurisdiction are: Kalof Pulp & Paper Mill and the Cadillac Container box plant, both at Port Hueneme; paper mill and box plant of Quaker Container Corp., Richmond, and Quaker's corrugated-container plant at Vernon.

With the addition of a new plant at Houston, Tex., U. S. Industrial Chemicals Co.'s total annual production capacity of low- and medium-density polyethylene resins has increased to 300 million lbs.

Soabar Co., Philadelphia, reports it will double production capacity in 1961 when plant and office operations are moved to a newly completed building at 7722 Dungan Rd. in Philadelphia.

Stockholders of Nashua Corp., Nashua, N. H., have voted approval of a three-for-one-stock split. The split brings the paper producer's total of Class A common shares to 2,001,000 and Class B common shares to 675,000.

Roy D. Wilson is new gen. mgr. of F. J. Stokes Co. of Canada, Ltd., sub. of F. J. Stokes Corp., Philadelphia. Mr. Wilson was previously a design engineer for Purolator Products.

Robert C. Langsett is mgr. of the newly created Merchandising Services Dept. and A. M. Browne has been named mgr. of the market-development dept. in the Packaging Materials Div. of Armstrong Cork Co., Lancaster, Pa. Mr. Browne will continue to direct food-industry sales development in addition to his over-all responsibilities. The new dept. incorporates package merchandising and additional customer services, including advanced product design, market research on customer packaging problems and the development of merchandising programs.



Langsett

Browne

Ecusta Paper, part of the Packaging Div. of Olin Mathieson Chemical Corp., New York, has established a New York sales office at 460 Park Ave.

An International Operations Group has been established by Sun Chemical Corp., New York. William P. Bittenbender is director of the new set-up, which will augment the company's current expansion of foreign facilities.

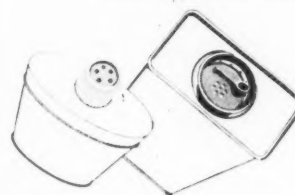
American Can Co., New York, is constructing a 60,000-sq.-ft. warehouse for its Canco Div. in Coloma, Mich.

C. Wilson Wood, Inc., Baltimore, has been appointed sales agent for The Crystal Tissue Co. (Eastern Pennsylvania, Delaware, Maryland, District of Columbia and Virginia), Paterson Parchment Paper Co. (Delaware, Maryland, District of Columbia and Vir-
[Continued on page 173]

For nearly 25 years
co-operative
packaging research
between
Johnson & Johnson
and J. L. Clark
has helped make
BAND-AID Adhesive
Bandages a
household name




*new concepts in
combination metal
and plastic...*



Clark research leads with significant new developments: combination metal and plastic containers of advanced design and maximum utility; a revolving polyethylene cap for talcum powder and related products—joining metal and plastic to provide a smooth-turning closure with maximum user convenience and siftproof protection. A combination metal and polyethylene pour-spout designed for spice containers—with plastic cap held securely, yet closing easily.

Still other advancements, in metal and metal plastic, are in process—some of which may solve your container problems. If you will outline your needs, we will gladly submit samples—or send a Clark representative to discuss your requirements.

J. L. CLARK MANUFACTURING CO.,
Rockford, Ill.; Liberty Division Plant
and Sales, Lancaster, Pa.; New York
Sales Office, Chrysler Bldg., N. Y. 17



these are top-quality Sheer Strips

*here they become
the conveniently packaged
BAND-AID Adhesive Bandages*

*millions
of families
recognize,
buy,
like,
buy again*

marketed in
**LITHOGRAPHED
METAL**

CONTAINERS

custom styled and manufactured by

J. L. CLARK



Send for informative booklet "A Businessman's Guide to Container Design."

SAVE

45%

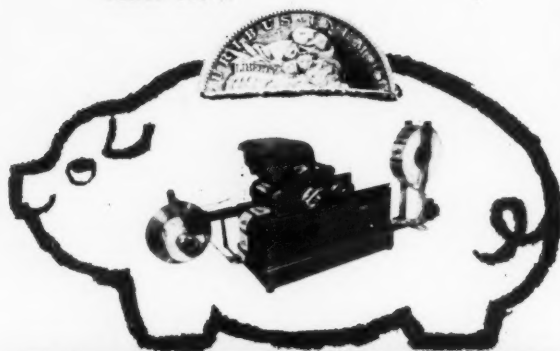
LABELING

with the KIMBALL PRE-MANAGED SYSTEM!

Send for this startling case history



See how this manufacturer saved 20% on initial master label costs and shaved 80% off the cost of secondary printing—for a net saving of 45% on material and labor costs.



SEND FOR YOUR COPY NOW!

A. KIMBALL COMPANY, REWE ST., BROOKLYN 11, N.Y.
Specialists in Product Identification and Integrated Data Processing
Offices in New York, Chicago, Los Angeles and other principal cities in U. S.
CANADA: A. KIMBALL LTD., 85 Advance Road, Toronto 18, Canada

Dept. MP-2

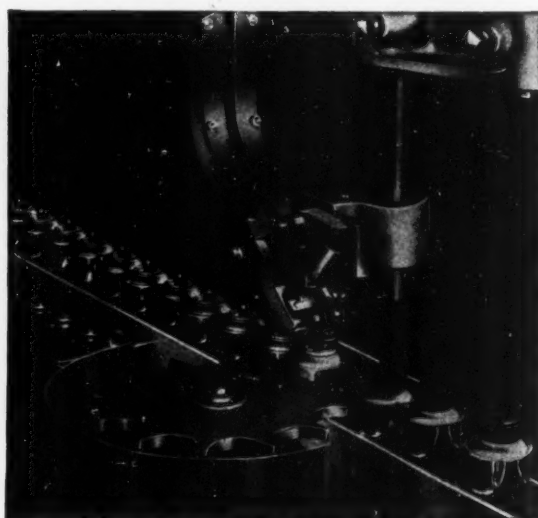
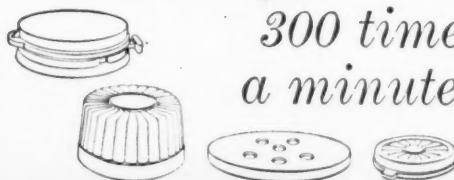
- ☐ Please send me free copy of "28 labels for 1,457 items."
- ☐ Please have representative call.



Name _____
Company _____
Address _____
City _____ State _____

The Cap Fits

300 times
a minute!



Closeup view of new Sorter Chute and Chute Escapement on H-O-F Capper. It rolls snap-on caps (up to 300 a minute) with perfect fit.

Now you can average up to 300 perfectly snug metal or plastic closures a minute with the Consolidated H-O-F Capper. That means extra profits—quickly!

An important feature is the escapement mechanism. It automatically holds back your fitment supply and rolls each fitment on carefully and exactly. No container, no cap device.

The H-O-F Capper complete with chute escapement, is equally fast and efficient with aerosol containers, odd or conventionally shaped over-caps. Also adaptable for ointment and shoe polish cans and other types of slip-fit closures. Easy changeover from one size container to another.

Ask our packaging specialists for complete information about the H-O-F Capper and the H-O-FV Valve Applicator for the drug, cosmetic and aerosol fields.

Write sales manager:

CONSOLIDATED PACKAGING MACHINERY CORP.

1400 WEST AVE., BUFFALO 13, N. Y.

A Subsidiary of International Paper Company



PACKAGES BY PLASTIC ARTISANS, INC., PORT CHESTER, N. Y.

BLISTER-PACKS OF TRANSPARENT ACETATE AND AMERICA'S MOST FAMOUS BRANDS

Like Colgate-Palmolive, marketers of the nation's best known brands blister-package with Celanese Acetate. On counter top, rack or shelf—where sales competition is keenest—transparent blister-packs keep products moving, fast.

Products are *always* shown at their very best in snug, vacuum-formed blister-packs of Celanese Acetate. They're fully protected against pilferage, abusive handling and contaminants. And shelf-life is greatly increased.

Countless products, from razor blades to flash bulbs, are being blister-packaged on in-plant machines, automatically,

in one continuous high-speed operation, at low cost.

Celanese engineers pioneered in the development of better vacuum forming methods and equipment. They will be pleased to help you get started in this exciting packaging technique—or furnish names of experienced vacuum formers. Please write to: Celanese Plastics Company, Dept. 103-J, 711 Broad Street, Newark 2, N. J.

Celanese®

Celanese Plastics Company is a Division of Celanese Corporation of America.
Canadian Affiliate: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver.
Export Sales: Ancof Co., Inc., and Pan Ancof Co., Inc., 100 Madison Avenue, New York 16.

Acetate . . . a *Celanese* packaging plastic

"7 out of 10
food purchases
are made on...
split-second impulse"



1. Food Fair Stores worked with the grower in the development of this transparent semi-rigid plastic tray which substantially increased the sale of dates in Food Fair Stores over the previous year! 2. This molded plastic package boosted an ice cream manufacturer's sales 69% in the first 3 months after it was adopted! 3. Gelatin salads packaged in these molded plastic containers outsold conventionally packaged salads, 20 to 1!

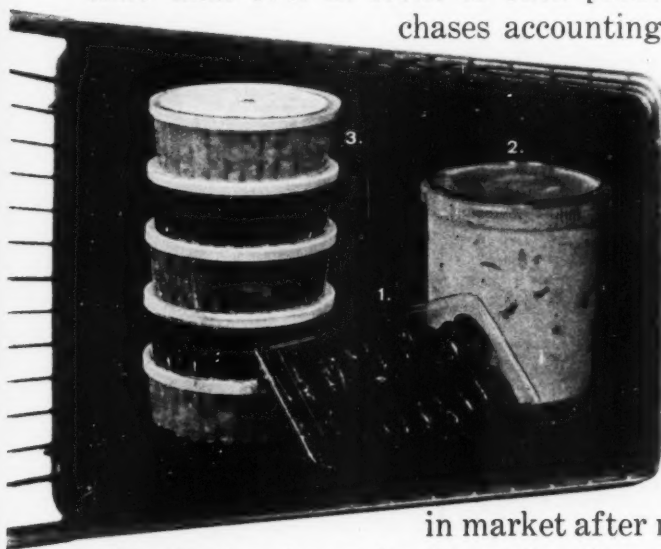


Mr. Dave Spike, Chain Produce Merchandiser, FOOD FAIR STORES, INC., reporting: "The modern housewife likes to do her food buying in a hurry. Our studies show she may hold down a job—or want more time for other interests. That's why she likes the speed, ease, and selection of supermarket shopping. This emphasis on speed puts a heavy selling burden on product packaging. . . . It must be both quickly eye-catching and quickly informative. Speed-up shopping is transforming my special province, the produce department. FOOD FAIR—pioneer in the prepackaging of produce—continually checks the sale of bulk versus prepackaged produce. As the sales warrant, we have given greater display to prepackaged produce. We welcome the opportunity to work with the grower willing to experiment in produce packaging. In fact, we have worked closely with many in the development of more effective packaging for their products. With Mrs. Shopper spending less time than ever in front of each product—and with unplanned, impulse purchases accounting for as much as 70% of all sales—it is

vital today that our sources continually study and re-evaluate their product packaging."

★ ★ ★

If you are among the 76% of all food and package goods marketers who are today re-evaluating their packaging, you will certainly want to be up-to-date on plastics. Plastics packages are attracting more attention and making faster sales for products



in market after market. The package designer, working with plastics, has a freedom of action second to none. Plastics lend themselves to the most imaginative designs, shapes, colors, and transparencies. The many new and expanded families of plastics offer combinations of properties unmatched by other materials. Plastics packaging fabricators and molders have the productive flexibility and capacity to translate new designs into dozens or thousands of low cost packages, highly adaptable to high-speed automatic filling, capping, printing and labeling procedures. For a special report on plastics packaging, and a list of qualified packaging manufacturers, write to Monsanto Chemical Company, Plastics Division, Room 783, Springfield, Mass.

Monsanto has developed a broad range of plastics for packaging—Lustrex® styrene, Monsanto Polyethylene, and Vupak® cellulose acetate—which are supplied to leading molders and fabricators of plastics packaging.

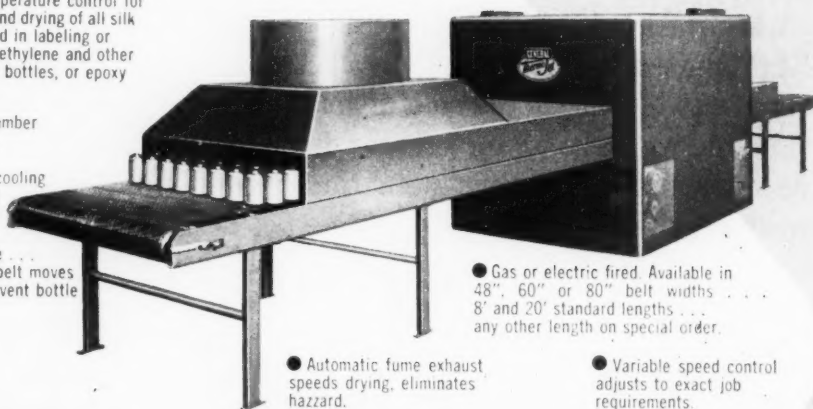
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MONSANTO DESIGNER IN **PLASTICS**

NEW GENERAL THERMO-JET CONVEYORIZED OVEN

FOR CONTROL IN CURING
PRINTING INKS ON
PLASTIC BOTTLES!

- Accurate temperature control for perfect curing and drying of all silk screen inks used in labeling or decorating Polyethylene and other types of plastic bottles, or epoxy inks on glass.
- Completely insulated chamber saves fuel, cuts shop heat.
- Pre-heating and pre-cooling areas assure a perfect "cure."
- Vibration-free . . . absolutely flat belt moves smoothly to prevent bottle tipping.



- Gas or electric fired. Available in 48", 60" or 80" belt widths . . . 8' and 20' standard lengths . . . any other length on special order.
- Automatic fume exhaust speeds drying, eliminates hazard.

- Variable speed control adjusts to exact job requirements.



FOR COMPLETE DETAILS WRITE

**GENERAL RESEARCH
AND SUPPLY COMPANY**

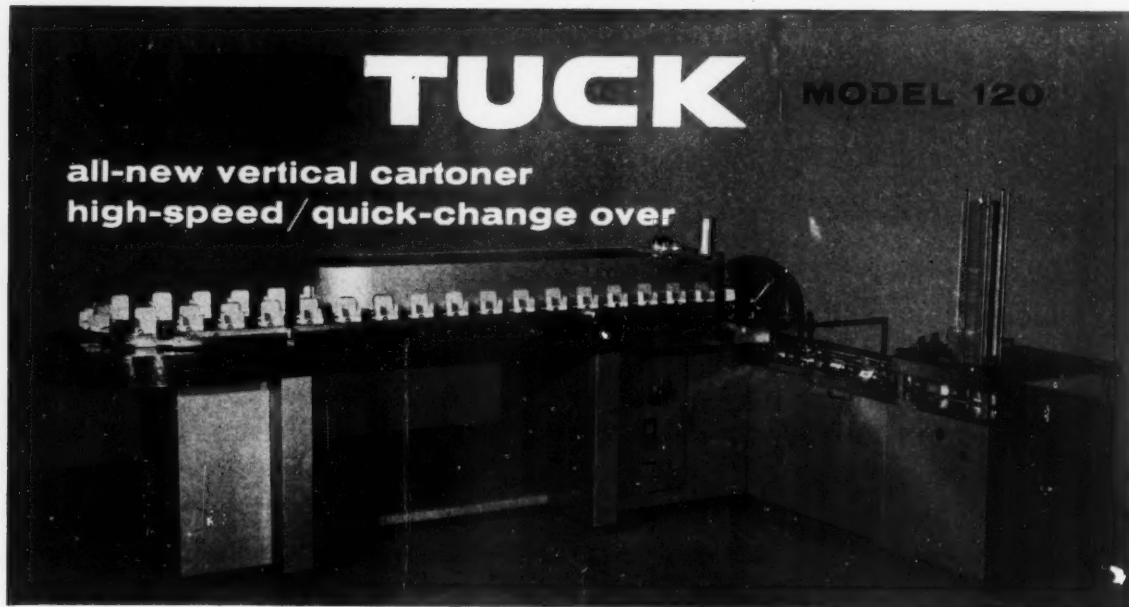
572 S. DIVISION AVE. • GRAND RAPIDS, MICHIGAN

- Complete safety engineering . . . meets all regulations . . . eliminates all danger.

TUCK

MODEL 120

all-new vertical cartoner
high-speed/quick-change over

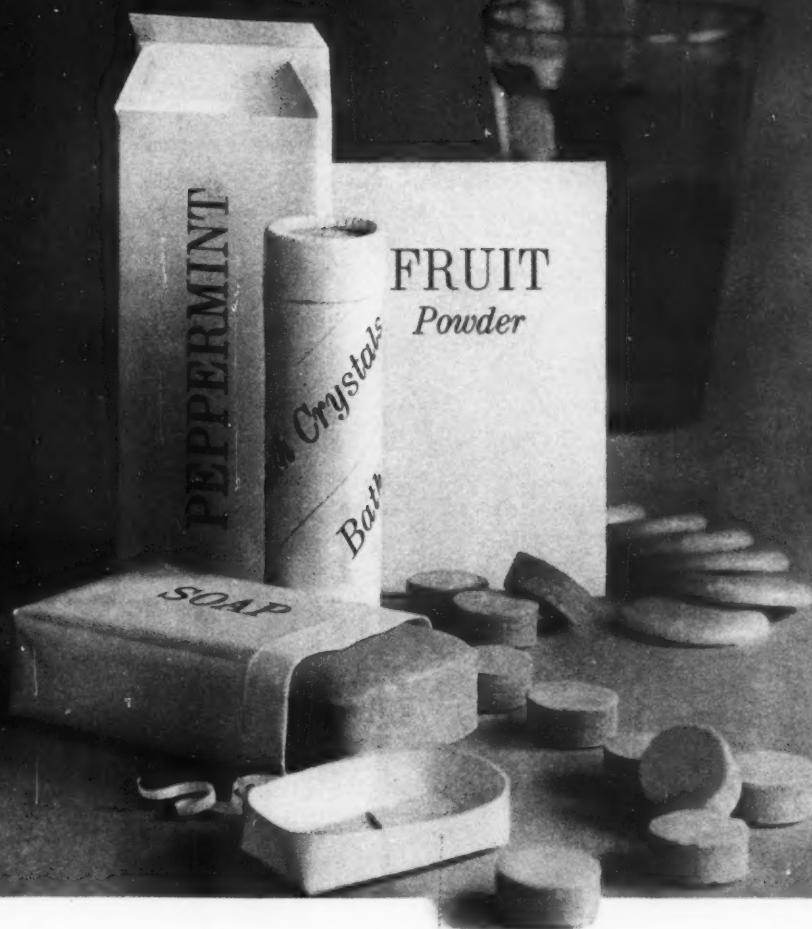


BIVANS CORPORATION



2431 Dallas Street, Los Angeles 13, California
Contact our distributor New Jersey Machine Corp., Hoboken, Cincinnati, Chicago, Los Angeles

Everyone is asking for it... Here it is...

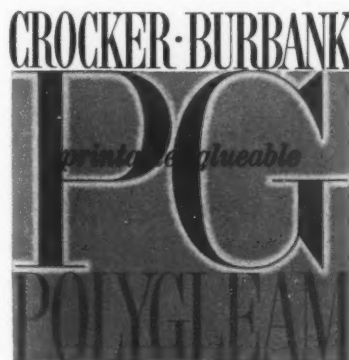


PRINTABLE, GLUEABLE EXTRUSION COATED POLYETHYLENE ...on Paper or Board

This new advance in the packaging field — PG POLYGLEAM by Crocker, Burbank — makes it possible to produce envelopes, wrappers and boxes, *on conventional package-making equipment*, using polyethylene coated paper that combines the functional qualities of polyethylene with a decorative, glueable, high gloss printing surface.

PG POLYGLEAM can be printed by standard processes on regular equipment with customary inks • can be glued on existing packaging and box-making machinery using ordinary water-base glues at standard production speeds • has high gloss, decorative, washable finish • is waterproof and highly moisture-vapor resistant • is grease resistant • will not crack on folding or scoring • will not migrate nor bleed • maintains all of these features permanently

Write today for samples and complete information.



PRINTED LETTERPRESS BY DANIELS PRINTING COMPANY, BOSTON, ON CROCKER-BURBANK PG POLYGLEAM. (BASE STOCK CROCKER-BURBANK POLYGLEAMCOAT)

PG POLYGLEAM is a Trade Mark of Crocker, Burbank Papers Inc.



Crocker-Burbank
Papers, Inc.

FITCHBURG, MASSACHUSETTS

*COATED and
UNCOATED
PRINTING PAPERS
for Letterpress,
Offset, Gravure*

*Special papers
for modern
PACKAGING*

*Also
ELECTRICAL PAPERS
DUPLICATOR PAPERS
CONVERTING PAPERS
RELEASE PAPERS
PACKET PAPERS
MILITARY BARRIER
PAPERS
SATURATING PAPERS
and other
FUNCTIONAL PAPERS*

Step up sales, cut labor costs... bundle your packages on the **OLIVER**



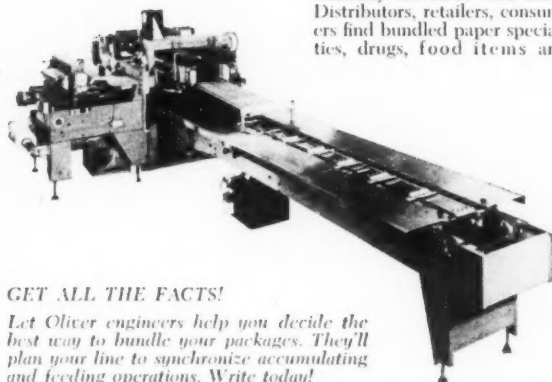
Overwrapping groups of packages into attractive bundles naturally increases unit sales. Distributors, retailers, consumers find bundled paper specialties, drugs, food items and

similar articles easy to stock and handle.

The recognized quick-adjustability of Oliver wrapping machines makes them ideal for bundling. You can use almost any heat-sealing material: polyethylene, Vitafilm, cellophane, or other soft, plastic films. Choose endfold or underfold, overall or line bottom and

end seals. Change for bundle size quickly. The Oliver can be supplied with interrupted bottom bar seal for easy opening. Even on short runs down-time is low. The exceptional range of sizes handled by the Oliver is another advantage.

Everybody goes for the new bundle of Pocket-Pack Kleenex containing eight units. The bundles please both eye and touch. They are neat and strong. For overwrapping a bundle of multiple units the Oliver wraps to sell and save!



GET ALL THE FACTS!

Let Oliver engineers help you decide the best way to bundle your packages. They'll plan your line to synchronize accumulating and feeding operations. Write today!



PACKAGING DIVISION

Grand Rapids 2, Michigan

FF ROLLER GUNS

for automatic packaging units

**INSURE BETTER BOND
CUT GLUING COSTS 83%**

Exclusive, fascinating stripe-action guns lay down multiple beads of adhesive, use up to 83% less glue, yet insure faster, better bonding regardless of machine speed. Ideal for carton sealing, box and tray assembling, package gluing, etc. FF equipment also eliminates "open" glue pots which minimize clean-up and maintenance time. Quick-change roller tips, in widths to 4 1/2", permits guns to be reset in seconds for different adhesive patterns. Air pressure adjustment for ribbon-coating.

In addition to roller guns, the FF line includes over 400 units to meet a wide range of industrial gluing needs. All models designed for both automatic and manual use. Fully patented and guaranteed. Easy to install on existing equipment. Our catalog should interest you... send for one today.

JOHN P. FOX COMPANY, INC.



1107 S. Mountain
Monrovia, California

STRIPING
ACTION



QUICK-CHANGE
TIPS



RIBBON
COATING

NOW! Package directly
from low cost
**V-FOLDED
POLY FILMS**



WELDOTRON Multi-Seal IMPULSE SEALER

One simple stroke seals all open sides of V-folded poly films, forming bags from 2" to 24" — thus eliminating high cost of preformed bags. 110 volt thermal impulse unit increases production rate, decreases power consumption (it's on only for a second while seal is made). Portable, easily positioned sealer handles printed or plain package materials. Requires no air.

- 1 Operator inserts product into V-folded film. Side A is sealed simultaneously with previous package.
- 2 Operator presses handle and remaining sides B & C are sealed instantly. Cutoff is automatic!

Write today for information on the complete line of Weldotron packaging equipment to Dept. M12.



Distributorships available in certain areas

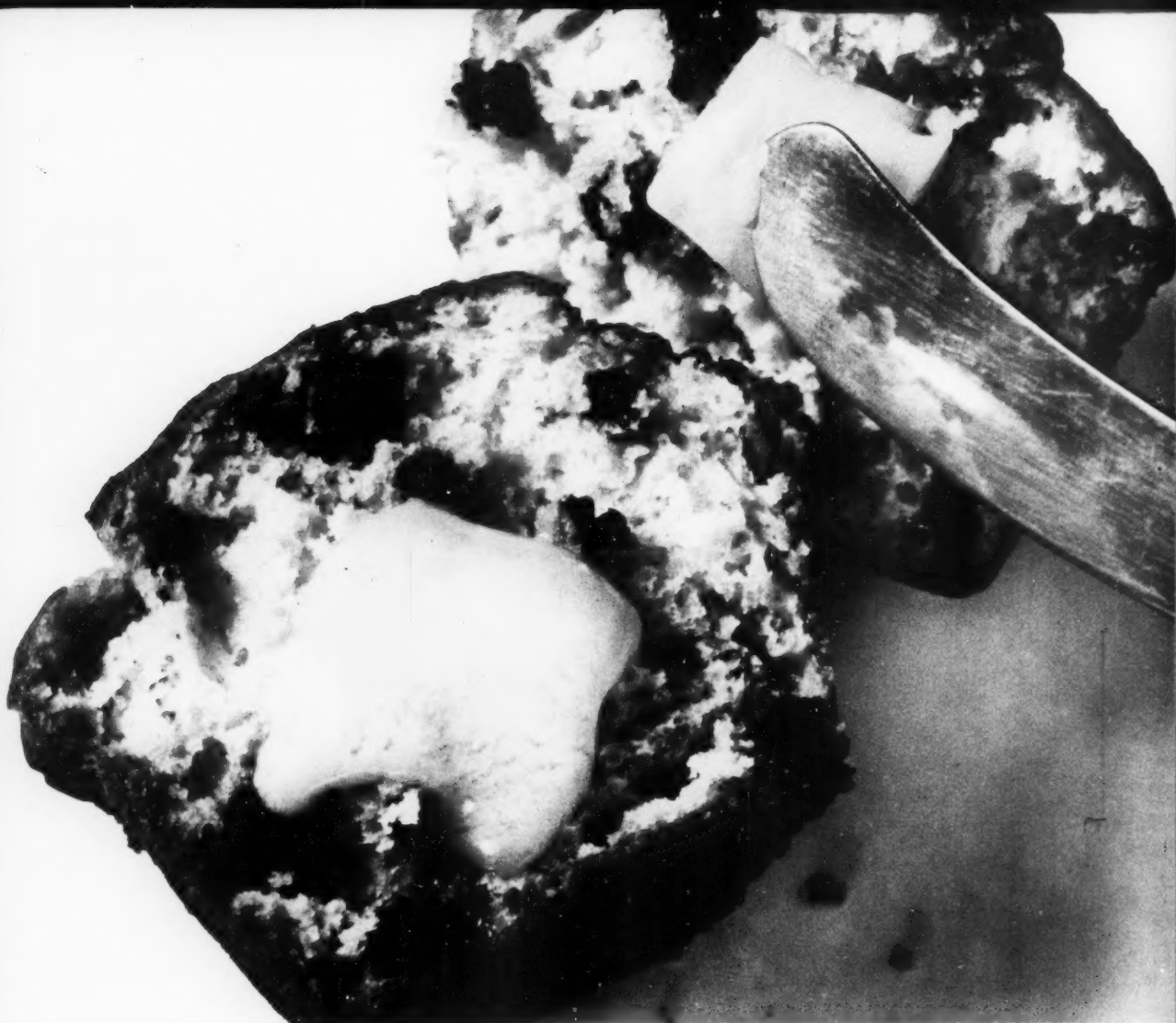
WELDOTRON CORPORATION
841 FRELINGHUYSEN AVENUE, NEWARK 12, N. J. TA 4-1096



Step 1



Step 2



How Lord Baltimore perfects a package that sells on sight

LORD BALTIMORE'S 85 years of experience in the graphic arts results in quality packaging for today's mass or premium markets. Like this one in Procter & Gamble's successful Duncan Hines line.

This dramatic package was achieved by our exclusive Fidel-I-Tone[®] process. One that combines exacting color photography and our precision 175- to 250-line micro-screened originals and press plates.

Lord Baltimore was the *first* in the fold-

ing box field to offer 4-, 5- and 6-color offset presses. Now, all our plants offer these versatile presses as well as rotogravure and letterpress equipment.

Choose from a myriad of finishes including our Par-A-Glaze[®]—the finest high-gloss coating available for frozen foods.

We can construct a carton precisely designed for your product. Write: 425 Park Ave., New York 22; San Mateo, Calif. or 333 N. Michigan Ave., Chicago, Ill.



Lord Baltimore Press

Plants & People

[Continued from page 162]

ginia), and The Specialty Papers Co. (Eastern Pennsylvania, Delaware, Maryland, D. C. and Virginia.)

Farrington Mfg. Co., Needham, Mass., recently opened a new manufacturing plant at Westbrook, Me. The company makes plastic packages.

The M. D. Knowlton Co., Rochester, N. Y., has acquired the assets of the Mayer Machine Co. Henceforth, the Mayer Machine Div. of M. D. Knowlton Co. will make roll-coating machinery. The parent company manufactures paper-tube and can and paper-box making machinery.

Promotions

Herbert J. Schindler: to regional mgr., Southeast Div., **The Dobeckmun Co.**, Cleveland, div. **The Dow Chemical Co.** **Robert J. Russ** succeeds Mr. Schindler as district mgr. in Baltimore.

Frank B. Crumbaugh, Jr.: to sales mgr., Kansas City plant, **Owens-Illinois Glass Co.**, Toledo.

James F. Hallinan: to administrator, bread-wrapper and board merchandising, bakery-packaging sales, **Marathon, Div. American Can Co.**, Menasha, Wis.

E. Garfield Gifford: to sales mgr., New York, folding cartons, Boxboard & Folding Carton Div., **Continental Can Co.**, New York. He succeeds **C. S. Reid**, retired. His former post as Philadelphia sales mgr. for the Div. has been assumed by **Nils Hansen**. **Darwin Crammer**: to boxboard sales mgr., **Elkhart, Ind.**

P. C. Whiting, Jr.: to Midwestern sales mgr., **The Marvellum Co.**, Holyoke, Mass. **Marvellum** does polyethylene extrusion coating.

William F. McDonald: to mgr. customer services, **Polymer Service Laboratories**, U. S. Industrial Chemicals Co., New York. **Gerald M. Platz**: to mgr. plant services.

Lee E. Sherrick: to Southern adhesive mgr., **Charlotte, N. C.**, **Stein, Hall & Co.**, New York.

Herbert O. Corbett: to chief extrusion technologist, **The Kordite Co.**, Macedon, N.Y.

Warren J. Hayford: to district mgr., Philadelphia, metal can sales, **Continental Can Co.**, New York.

Richard B. Stanley: to v.p., **Aerosol Div.**, **Kartridg Pak Co.**, Franklin Park, Ill.

Robert S. King: to Eastern sales mgr., **Demuth Glass Works, Inc.**, sub. **Brockway Glass Co.**, Brockway, Pa.

Charles L. Thomas: to district mgr., Milwaukee, **Crown Cork & Seal Co.**, Philadelphia.

C. G. Thrash: to Chicago mgr., commercial container div., **Ball Bros. Co.**, Muncie, Ind. **S. E. Nielsen** succeeds him as mgr. of the Pittsburgh office.

Appointments

U. Sykes Mozneck: from **Casco Products Co.** to director of advtg. and product promotion, **Landers, Frary & Clark**, New Britain, Conn. Mr. Mozneck will be responsible for promotion of all the firm's products, including packaging.

Paul M. Kotuby: from **Singer Mfg. Co.** to research staff, **The Risdon Mfg. Co.**, Naugatuck, Conn. He will work on aerosol valves and pressurized packages and the development of new products.

Melvin A. Swanson: from **KVP Sutherland Paper Co.** to asst. product mgr., food-packaging div., **Rap-In-Wax Co.**, Minneapolis.

Donald H. Anderson: to mgr. of sales, Milwaukee, **Tower Packaging Co.**, Wheeling, Ill. Tower extrudes, prints and converts polyethylene.

George S. McTavey: to sales mgr., **Atlantic-Vulcan Steel Containers, Inc.**, Peabody, Mass.

David C. Arndt: from **Union Carbide Chemicals Co.** to sales mgr., New York, **Puritan Aerosol Corp.**, Boston.

Harmon Leder: to sales force, **Klear-tone Transparent Products Co.**, Westbury, N. Y. Mr. Leder is a graduate of Michigan State University's School of Packaging.

Obituaries

Robert P. Scherer, who founded the **R. P. Scherer Corp.** in 1933 after developing the first rotary die process for producing soft gelatine capsules, died July 27. He was 53. At the time of his death, Mr. Scherer was pres. of the company, which is reported to be the largest manufacturer of vitamin capsules in the world. Mr. Scherer went into business



Scherer

at 26 after three years of developmental work on his capsule-making machine, which was inspired by the difficulties he encountered as a young pharmaceutical-company employee in making capsules under the primitive methods then used by drug manufacturers. His method, which represented a major improvement in capsule making, was to melt gelatin and feed it onto two moving belts, where it was made into thin pliable sheets. As the sheets were fed into rollers containing dies, capsules were formed, with the liquid product being forced between the sheets of gelatin.

Sidney L. Abramson, founder and pres. of **Central States Paper & Bag Co.**, St. Louis, died Aug. 5. Mr. Abramson, 60, founded the company in 1920 as a paper-distributing firm. It has since grown to a converting operation with plants in three states.



How LORD BALTIMORE helped perfect a selling package for Duncan Hines

DUNCAN HINES' new package was designed by **Donald Deskey Associates**, working with **Procter & Gamble's** art department. They selected realistic art work. The product had to be shown in appetizing, brilliant color to insure maximum sales appeal.

Exacting craftsmanship

Lord Baltimore's experts in reproduction techniques recommended our **Fidel-I-Tone** process to assure meticulous reproduction and faithful colors. Every phase of the photographic, platemaking and printing process was then supervised in one of Lord Baltimore's plants by a team of engineers, inspectors and craftsmen.

Award-winning process

This attention to detail and our **Fidel-I-Tone** process results in a package that sells on sight. Since the development of **Fidel-I-Tone**, Lord Baltimore has won more **Folding Paper Box Association's Technical Superiority in Printing** awards than any other packaging service.

Matched nationwide facilities

Lord Baltimore's folding box plants are located in Baltimore, Md.; Clinton, Iowa and San Leandro, Calif. They are backed by the complete resources of **International Paper's** mills and research laboratories. Our matched nationwide facilities and 11 sales offices serve these packaging fields:

Dry Foods	Pharmaceuticals
Cosmetics	Dairy Products
Frozen Foods	Tobacco
Beverages	and many others

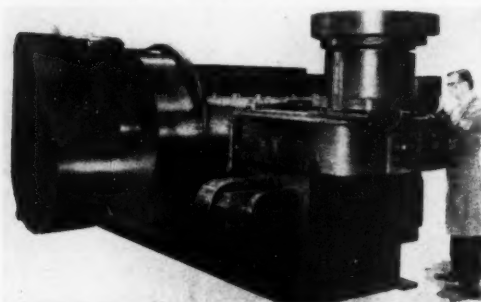
Equipment & Materials

[Continued from page 60]

product data; reduction of handling expense from that for standard six-packs; reduced bottle breakage, due to the carrier's rugged construction, and rapid assembly of the carry pack, without the need for special equipment. Further information on this multipack is offered by *Bertram Wire Products, Inc.*, 41 Carroll St., Buffalo 3.

Extrusion press makes aluminum cans

Seamless aluminum cans may now be impact extruded at the rate of 120 per minute on the new 300-ton Impact-Extrusion Maxipres, reports the machine's developer, National Machinery Co. The press delivers the cans ready for



trimming, flanging, cleaning, coating, filling and closing. The new press extrudes aluminum cans 5 in. high from a disk measuring $\frac{1}{8}$ in. thick by $2\frac{1}{2}$ in. in diameter. A die adjustment varies can-bottom thickness while the press is running. The technique of impact extrusion, by which the unit operates, is potentially the lowest-cost method of aluminum-can fabrication, says the supplier. *The National Machinery Co., Tiffin, O.*

VCI papers for non-ferrous metals

Reported to guarantee active, positive protection for non-ferrous metals is Daubert Chemical's new Daubrite line of volatile corrosion inhibitor papers. The supplier says that the sulfur-free papers inhibit oxidation, thus preventing tarnishing of such metals as copper, brass, bronze and cadmium. Non-ferrous metal objects wrapped in the VCI papers will remain free from oxidative effects for several years, despite high humidity or corrosive atmospheres, says the firm. It is not necessary to seal the paper wrapping. The new line of papers is offered in a variety of weights and finishes, and in widths up to 60 in. *Daubert Chemical Co., Nox-Rust Div., 4700 S. Central Ave., Chicago 38.*

Plastic film with 'kidskin' feel

New from Monsanto's Plastics Div. is Santofome, a flexible plastic film manufactured from polystyrene foam and reported to be competitive in price with paper. The film has the appearance and feel of kidskin. It is said to be waterproof, sanitary, lightweight, non-abrasive and grease resistant, in addition to having good insulating and cushioning properties. The material has been approved for use in food packaging by the Food & Drug Administration, the supplier reports. Price of the film material ranges from \$4 to \$7 per 1,000 sq. ft., depending on type and quantity. It is available in thicknesses from 0.010 to 0.030 in. and in rolls 36 in. wide and up to 7,000 ft. long. As a film or laminate, the material is suggested for frozen-food packaging, as wrapping or liner for fragile or highly polished products, and for containers where thermal insulation is desirable. *Monsanto Chemical Co., Plastics Div., Springfield, Mass.*

Paper and foam-plastic combination

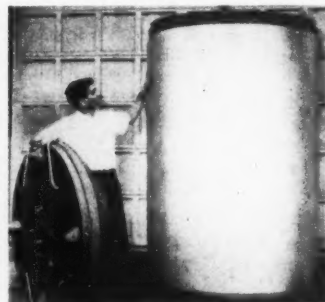
St. Regis Paper has developed a patented material in which a flexible sheet of foam polystyrene is bonded to a flexible sheet of paper or other material. The inexpensive combination is reported to be waterproof, greaseproof, chemically inert, non-abrasive and to have a high thermal-insulation factor. These properties, says the company, lend the foam-laminate material to the manufacture of bags, paper plates, corrugated containers, folding cartons and other packaging materials primarily for use in the food industry. *St. Regis Paper Co., 150 E. 42 St., New York 17.*

High-strength strapping tape

Behr-Manning introduces a flexible, non-metallic pressure-sensitive strapping tape made with a vinyl backing and reinforced with rayon filaments. The tape, designated No. 295, is reported to possess both high adhesion (60 oz. per in. of width) and excellent impact resistance (provided by a 12% stretch at break). Its tensile strength is 240 lbs. per in. of width, the supplier notes. The tape is suggested for bundling operations or for reinforcement of shipping cartons. Because of its flexibility, the pressure-sensitive tape conforms to the contours of regular or irregular-shaped packages or products. The tape is offered in widths down to $\frac{1}{4}$ in. *Behr-Manning Co., Div. Norton Co., Troy, N.Y.*

Collapsible bulk container

Highway Trailer Industries reports the development of a collapsible plastic container for bulk shipments of such free-flowing liquid or dry products as oils, chemicals, juices, beverages, cement, plaster, grain and fertilizer. Called the Flexi-Drum, the container when empty collapses to a height of only 12 in., for convenient storage. The collapsible wall of the cylindrical drum is polyvinyl-chloride-impregnated nylon fabric. The container's top and bottom are Fibreglas-reinforced polyester. Other material formulations could be used in container construction, says the supplier. A thin, disposable plastic inner liner eliminates the need to clean the container after use and makes it usable for different products without danger of contamination. The container is readied for filling by suspending it from rope loops that connect the bottom and top closures. Orifices in the top and bottom closures permit easy filling and emptying. The 47-in.-diameter drum is offered in three sizes: 40 in. high, 69 in. high and 98 in. high. Drum capacities are 250, 500 and 800 gallons, respectively, the supplier company reports. *Highway Trailer Industries, Inc., 250 Park Ave., New York.*



Wrap-around bottle carrier

Designed for use with no-deposit, no-return bottles is the new André-Matic six-pack wrap-around carrier carton. André-Matic Machinery Co., the developer, has licensed Weyerhaeuser to manufacture the carton and to market two new bottle-cartoning machines specifically designed to accommodate it. The wrap-around carton provides merchandising panels on the ends, sides and top of the carrier. The end

Still **TOPS** in M.V.T. PROTECTION

Thilco VAPOTITE



Keeps moisture-vapor in or out—where wanted . . .



Is odorless, non-staining, clean, pure and non-toxic . . .



Preserves food flavors and freshness, longer . . .



Protects products from tacking, sticking and blocking . . .



TAPE INC. — Packages its gummed roll tape in heavy-duty VAPOTITE bags to protect it from deterioration over extended periods of storage in distributors' warehouses and customer inventory. VAPOTITE's superior-moisture vapor resistance preserves glue's proper consistency — safeguards against tacking and sticking at temperature extremes. One Tape Inc. customer reports perfect condition Tape even after 6 years of "hidden storage" inventory.



KRAFT FOODS — Gelatin dessert is packaged in a VAPOTITE bag carton liner as the surest way to preserve the product's flavor and freshness and prevent granules from caking. VAPOTITE does not stain or offset, nor does any odor develop from it to permeate the package and damage the naturalness of Kraft's tasty flavors. Because it is sanitary, clean, and non-toxic, VAPOTITE is ideal for packaging food products of many different types.



WILLIAMS CANDY CO. — Of Oklahoma City uses economical VAPOTITE case liners to preserve "factory freshness" of its bulk candies in storage. Hard candies and confections can be produced in "off seasons" and stored for later distribution without danger of sticking and blocking, or loss of sheen due to moisture-vapor penetration. The Williams Co. tested many packaging mediums but found none as effective in M.V.T. protection as VAPOTITE.

WHAT IS THILCO VAPOTITE?

VAPOTITE, as the name implies, is a wax laminated sheet with an exceptionally high M.V.T. rating. It combines two outer plies of closely formed quality kraft, glassine or grease-proof papers, each double-coated and laminated with special blends of micro-crystalline waxes. It has packaging strength and pliability which readily permit its conversion into spiral containers, case liners or small unit size bags without damage to wax film M.V.T. resistance. VAPOTITE is economical, low in cost, and can be furnished "tailor-made" to specific requirements in color or with eye-appealing print decorating, as desired.



Write — today for free "Tell-all" kit and samples. Tell us the nature of your M.V.T. problem and let us help you with specific recommendations.

Thilco

One Thilco Call — Does it all, for . . .

Functional Papers **FOR PROTECTION THAT COUNTS!**

NEW YORK * CHICAGO * DETROIT * BOSTON * KANSAS CITY * CLEVELAND * CINCINNATI * CHARLOTTE

THILMANN PULP & PAPER COMPANY
KAUKAUNA - WISCONSIN

Equipment & Materials [Continued]

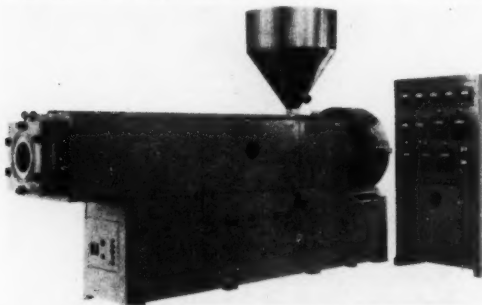
panels also act as protective cushioning to separate six-packs as they are placed in shipping cartons. Two styles of the carrier are available. One features built-in bottle separators that eliminate the need for extra board inserts and inserting machinery. The other carton style has no board separator; it holds bottles in position through die-cut crown locks and tabs that separate bottle bottoms. Both carton styles are stackable. The two new cartoning machines for use with the carrier are the Model G-650 and the Model G-350. These automatic units reportedly will package 650 and 350 bottles per minute, respectively. For further information, contact Weyerhaeuser Co., Boxboard & Folding Carton Div., 919 N. Michigan Ave., Chicago 11.

Polyester for frozen-food packaging

Polyester sheeting for use in the packaging of frozen foods is now being marketed by Acme Backing. The material is extruded from polyester resin developed by Tennessee Eastman Co. Among the properties cited for the material are toughness, brilliant clarity, high heat-distortion temperature, low moisture absorption and excellent resistance to chemicals. The material will be marketed under the trade name Terafilm. Details are available from Acme Backing Corp., Canal & Ludlow Sts., Stamford, Conn.

Extruders for big-volume users

A new series of air-cooled plastic-extruding machines, reportedly designed particularly for large-volume users, is available from Modern Plastic Machinery. The extruders



are made with 6- and 8-in.-diameter screws as standard equipment; 10- and 12-in. barrels can be made to order. All four sizes are offered in vented or non-vented design and are supplied with resistance-band or cast-in heaters. The manufacturer reports that such machine parts as extra-heavy-duty thrust bearings, forged steel barrels and precision-ground screws permit heavy usage with a minimum of maintenance. Modern Plastic Machinery Corp., Clifton, N.J.

Modular flexographic press

Constructed with a view toward future requirements of the growing converter is Faustel's new modular flexographic press. The unit has a pre-drilled frame for stacking of up to six colors. Available in sizes from 15 to 42 in., the press can be used for tail-end printing or full roll-to-roll operation, says the supplier. Other features reported for the press are running register control and positive lockup via helical gearing. Faustel, Inc., Butler, W. Va.

Record-wrapping machine

Claimed to be the first fully automatic machine for the packaging of flat, paperboard phonograph-record albums is Serv-All Machinery's Record Wrapper. It is designed for use with thermoplastic films, and it reportedly can work with shrinkable films because the seal is held under pressure during the heating and cooling cycles. Rated speed of the unit is 1,440 records (12 in.) per hour. In machine operation, a 14-in.-wide web of film is fed from each of two rollers into the unit. The record to be wrapped is sandwiched between the film and pulled through U-shaped sealers, which

form a double seal on the record album's trailing edge and on the lead edge of the next album in line. Blade cut-off is located between double sealers and operates during thermal-impulse seal compression. Offered as optional equipment with the basic machine are a feed mechanism and a shrink tunnel. In development is an improvement which will enable the wrapper to accept packages up to 1½ in. thick. Serv-All Machinery Corp., 1300 E. Elizabeth Ave., Linden, N.J.

Finger-grip polyethylene jug

New from Hydrocarbon Chemicals is a square-shaped, two-handled finger-grip jug, blow molded of W. R. Grace's high-density polyethylene. The 1-gal. container is intended for a range of uses, including the packaging of liquid chemicals, starches, bleaches, syrups, acids and industrial supply items. Its square shape facilitates storage and the double handle offers easier and safer handling.



Claimed to offer substantial weight savings over conventional containers, the corrosion-resistant plastic jug is available in opaque and natural colors. The jugs are supplied four to a re-usable shipping container. The compartmented corrugated shipper can be re-packed with the jugs after filling, for product shipment. Hydrocarbon Chemicals, Inc., Plastics Div., Keyport, N.J.

Two imprinting attachments

Bell-Mark reports the introduction of two new imprinting attachments. The supplier's Model 1820 is designed for imprinting on extra-long or continuously running materials, such as extra-length shipping cartons. The imprinter has an 18-in. circumference and a 1-in. face width. According to the company, the friction-drive attachment can be mounted on any conveyor, packaging or production machine. The company's other new imprinting attachment is mounted on automatic unit-packaging machines to imprint codes or other data on unusually small package areas. The Model 1006 has a 6-in. circumference and a 2-in. face width. Printing rollers can be removed easily for adjustment or change of data. The attachment derives its power from the parent machine to which it is mounted. Bell-Mark Corp., 18 Ropes Pl., Newark 7, N.J.

Wirebound and corrugated shipper

Designed for the shipment packaging of film-bagged turkeys is Package Research Laboratory's new "T" Box—a shipping container that combines both wirebound and corrugated construction. The shipper consists of

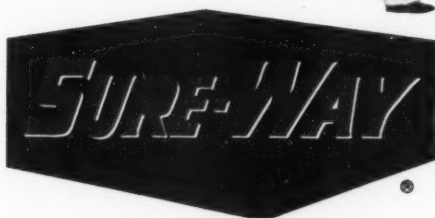


an open-top corrugated tray and a separate four-section wirebound wooden wrap-around with a corrugated panel pre-stitched to the top section. It is reported to fit conventional blast-freeze and liquid-freeze operations. Five sizes of the container are available, to suit varying packing requirements. The corrugated tray also is offered in two styles; to adapt to blast-freezing or liquid-freezing. In the former case, the sides of the tray are die cut and slotted so they can be folded down to allow proper circulation. According to the company, the new shipper

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Automatically opens cases—loads—seals

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sure
—up to 25
cases a minute



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The Model M-41 "Sure-Way" brings you a number of exclusive features in fully automatic package casing equipment. Each of these features is carefully designed to meet the industry's needs for a fully automatic machine to erect, position, load and seal shipping cases in a continuous high-speed, in-line operation.

Shut downs and bottlenecks are eliminated. Operating costs are reduced. To sum it all up, here is the machine that helps build profits. Here are a few of the major features:

The new shipping case feeding and erecting mechanism employs duplex vacuum cups which are cam activated, stripping the bottom case from the vertical stack of 125 or more flat shipping cases.

New pressurized gluing system, incorporating "No case-No glue" device, gives greater uniformity of glue application, cuts maintenance and cleanup time. Intermittent motion of the compression unit allows maximum dwell time in minimum floor space — the average unit is less than 29' long, overall.

Complete console station centralizes all control of the machine, ensuring a smooth uninterrupted operation. Safety interlock switches throughout provide sure, positive functioning. Write for full information or call your nearest FMC representative.

The automatic case erecting-positioning assembly and the sealing-compressing assembly are available separately for existing installations of "Sure-Way" Casers.

Putting Ideas to Work



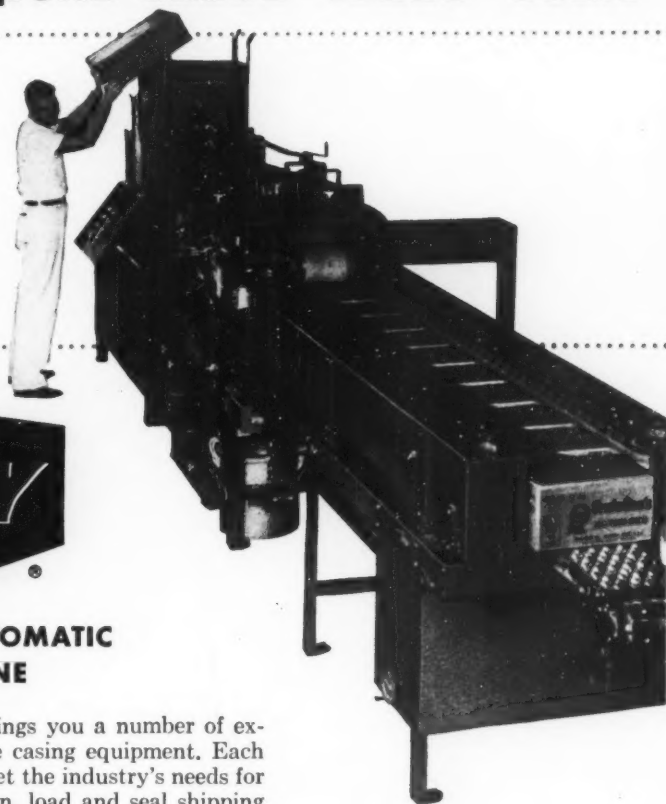
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FMC PACKAGING MACHINERY DIVISION: 4900 Summerdale Ave., Philadelphia, Pa.
CANNING MACHINERY DIVISION: Hoopeston, Ill., San Jose, Calif.



"Sure-Way" Model M-41 integrated casing lines are operating in several leading plants. Shown here is one of two complete lines at the Houston plant of Uncle Ben's, Inc. Others already installed, or scheduled for early delivery, will be handling a wide variety of packaged products such as aluminum foil, cake mixes, sugar, soap and detergents. There is virtually no limit to the range of packages, patterns, case sizes and casing combinations the "Sure-Way" can handle.

Equipment & Materials [Continued]

offers excellent protection against drop damage and can be safely stacked to a height of 21 ft. or more. *Package Research Laboratory, Rockaway, N.J.*

Standard line of blow molders

Waldron-Hartig reports that it will henceforth produce standard blow-mold machinery as part of its regular product line. Among these units is the Model 2424D-10, a blow-molding machine with clamping pressure of 10 tons and free platen area of 24 by 24 in. The unit operates on the ram/accumulator principle, which is said to provide high-speed parison extrusion with no idle mold time and to insure excellent uniformity of temperature, size and wall thickness of the parison. The track-mounted press has a vertical jacking adjustment which provides immediate clearance from die, for easier mold changing. Control provision for manual or automatic operation is included. *Waldron-Hartig Div., Midland-Ross Corp., New Brunswick, N.J.*

Gummed labels that lie flat

Kalamazoo Label Co. offers a new line of gummed paper labels that are reported to lie flat without curling through extreme variations of temperature and humidity. Yet, says the supplier, the labels have sufficient body and bulk to handle well in labeling or imprinting machinery. Other features claimed for the label are that it offers no labeling resistance, conforms readily to container or product surface, and forms a strong and permanent adhesive bond. The labels are printed on "Prone" paper stock, a material developed and manufactured by the Mid-States Gummed Paper Div. of Minnesota Mining & Mfg. Co. Details on the labels are available from *Kalamazoo Label Co., Kalamazoo, Mich.*

Space-saving automatic stapler

The Space-Saver is International Staple's new, automatic dual-head industrial stapling machine for closing corrugated cartons. The device, which closes carton tops and bottoms simultaneously, reportedly will close up to 500 cartons per hour. Each of its dual heads will drive and clinch 5,000 staples before reloading. The new machine is adaptable to a broad range of carton shapes and sizes with a minimum of manual adjustment, says the supplier. Automated models are available that will feed cartons from an accumulator, close top flaps, drive and clinch the proper number of staples and move the carton to a discharge conveyor. *International Staple & Machine Co., Herrin, Ill.*

Paper-plastic sample dispenser

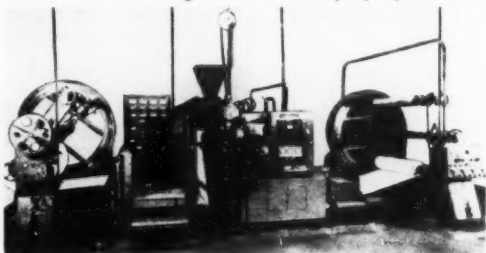
A miniature container for sampling or small-quantity packaging of dry granular materials is available from Leedpak. The Cylpak container is designed to dispense small amounts



of such products as sulfa powder, salt, cleaning powder or other free-flowing products through a reclosable shaker top. Body of the container is a foil, plastic or paper-lined tube which can be labeled in one or more colors by the supplier, which also does custom packaging. Shaker top is molded polyethylene, with a captive closure. The bottom is a plastic insert. The snap-close captive lid forms a positive seal against product sifting. *Leedpak, Inc., 294 Fifth Ave., New York 1.*

Polyethylene extruder-coater

A 54-in. polyethylene extruder-coater, reported to assure controlled film thicknesses and continuous operation, has been installed at Marvellum's Holyoke plant. The new extrusion line was designed for the company by Midland-



Ross Corp.'s Waldron-Hartig Div. Marvellum reports that the equipment will enable it to expand its services to include the supplying of types of paper, film foil and fabric combinations that could not previously be obtained from any one supplier. The equipment, says the company, makes possible the production of such materials as polyethylene-coated paper for packaging sugar and other dry foods, multiwall bags, decorative and protective ream and roll wrappers, and polyethylene combinations for food packaging. The new machine line consists of a rotating unwinder, splicing section, extruder and 60-in. die, coater-laminator, slitting section and rotating winder for continuous action. Further data on this equipment are offered by *The Marvellum Co., Holyoke, Mass.*

Pressure-sensitive blister-pack card

Field Paper Box adapts the pressure-sensitive-adhesive sealing technique to fold-over cards for blister packaging. The supplier's "Field-Stik" method employs spots of pressure-sensitive adhesive to adhere one side of the fold-over card to the other after the product has been loaded into the thermoplastic blister positioned on the card's face. Economy and efficiency are cited as features of the technique. No sealing machinery, gluing operations or staples are required. The treated card is simply folded over and its sides adhered by gentle pressure, says the supplier. *Field Paper Box Co., 1740 N. Pulaski Rd., Chicago 39.*

Automatic marking of tapered tubes

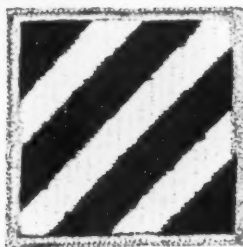
Tapered containers of plastic, metal or glass reportedly can be marked at speeds of up to 100 per minute by a new imprinting machine developed by Markem Machine. Designed for bench mounting, the device provides automatic feeding, imprinting and ejection. Objects up to 2 1/4 in. in diameter are fed from a curved chute magazine into the imprinting mechanism. Short-run marking, says the supplier, is made feasible by the unit's flexibility in adjusting to containers of different sizes, and by the use of quick-change type inserts. *Markem Machine Co., Keene, N.H.*

Gravure press for films

Designed expressly for printing on such stretchy thermoplastic films as polyethylene and polyvinyl chloride is Cerutti's new Polyroto rotogravure press. According to the company, the press prints four or more colors in close register at running speeds up to 200 ft. per min. It is made in standard web widths of 48, 60 and 72 in., with a repeat range of 18 1/2 to 86 1/2 in. Among other features reported for the new press are: between-color drying, final drying prior to rewinding, a two-roll turnover unwind, rapid roll changes, pneumatic-loaded printing pressure and accurate control of length register. Information is available from *Cerutti Presses of America, Westfield, N.J.*

Twine-tying machine offered

New from B. H. Bunn is a twine-tying machine which is claimed to cut costs and increase efficiency in the tying of paperboard stock, telescoped boxes, box liners and other paperboard-container products. The machine is simple in



"Looks like the Third Division is moving up..."

"...those are staff sergeant's stripes"

"The 15th Bombardment is here..."

"He just made Electronics Technician third..."

In this way every man in the armed forces during World War II unmistakably identified his rank or specialty, his outfit — by the marking on his shoulder patch, on his "stripes", on the plane he flew. Literally hundreds of new marks had to be devised to identify the special groups and the greater numbers in service than ever before in history — yet millions of people nevertheless recognized these marks and instantly knew their meaning.

marks of service

And this is exactly what *all* marking is for — the trademark and detail on a clothing label, a date code and value on an electronic component and the sales message on a plastic novelty all say what the product is or how to use it or who made it. At least this is the job that marking *should* be doing on *your* product or package ... to speed its handling, help in its sale or end use, and encourage reordering.

Our business is developing the machines, printing elements and specialty inks to help you identify your product more effectively — and at the same time save you money. The best answers for one industry are often totally different from those for another industry, so we have available a sizable variety in equipment, marking methods and inks. The easiest way to find out which combination best suits your needs is to tell us what information you want to put on your product — and what the product is. Our answer may mean smoother production in your plant — and money in your pocket. Markem Machine Co., Keene 1, N. H.

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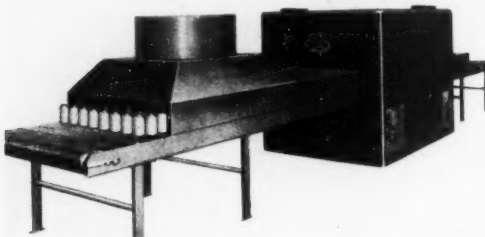
Top to bottom: 79th Inf. Division,
Electronics Technician 3 (Navy), 9th Bombardment Group,
Staff Sergeant's chevrons, Third Inf. Division,
15th Bombardment Group, Navy Squadron VF-6.

Equipment & Materials [Continued]

operation: After the bundle to be tied is placed on the unit's tying table, the operator trips a foot switch and the machine's twine-carrying arm ties the bundle. Twine is automatically knotted and cut. Reported to speed up tying time and to eliminate several manual operations, the new unit is offered in various models. For more data, contact B. H. Bunn Co., 7605 Vincennes Ave., Chicago 20.

Plastic-bottle drying oven

The Thermo-Jet is a fully conveyORIZED oven for drying and curing printed labels and decorations on polyethylene and other plastic bottles and for drying epoxy inks on glass. Made and offered by General Research & Supply, the oven is said to provide accurate belt speed and temperature settings for control in curing and drying all silk-screen inks used on plastic bottles. In operation, bottles move by belt conveyor through a pre-heating area, into the insulated



heating chamber and out through a pre-cooling area. A "jet-heat" distribution principle is designed to speed drying. Bottle tipping is prevented by the vibration-free movement of the conveyor belt, says the supplier, General Research & Supply Co., Grand Rapids, Mich.

Pouch former-filler-sealer

An automatic machine that forms, fills and seals pouch containers for liquids, creams and pastes is offered by Speedway Machine & Tool. The Model LF-60 forms pouch packages (from roll-stock cellophane, foil, polyethylene and other materials) ranging in length from 1 to 12 in., and in width from $\frac{1}{4}$ to $8\frac{1}{2}$ in. Single or strip packages can be produced. Two independently operated packaging stations give the machine a variable production speed of 15 to 36 strokes per minute, says the supplier. A feature of the machine is a design principle which reportedly permits die and tooling changes to be made in a brief period of time and at low cost. Speedway Machine & Tool Co., 1802 N. Luett St., Indianapolis 22.

Carton-stapling equipment

Container Stapling Corp. offers two new stapling machines—one for setting up double- or triple-wall corrugated cartons and the other for fastening fibreboard or double-wall corrugated trays, shipping bags or interior packaging. The former unit, Model G-BA, uses large-size staples which are power driven for secure setting up of shipping containers of up to 1,100-lb. test. A double-acting pneumatic piston is claimed to guarantee rapid, accurate machine performance. Because of the size and holding power of the large staples used, says the supplier, only a few staples are needed for container set-up. The company's second new machine, the Model TS, also operates by pneumatic power. One-hand controlled, the device is supplied mounted in a steel ring (allowing 360-deg. rotation) for attachment to a balance reel. This stapler also uses large-size staples; it has a magazine capacity of 150 staples. Container Stapling Corp., Herrin, Ill.

Four-cylinder filler for liquids

A four-cylinder piston filler, designed for high-speed filling of liquids or semi-liquids, has been added to Elgin Mfg.'s Non-Stop line of equipment. The new machine reportedly

allows easy product or container change-over while eliminating spillage which may occur during interrupted starting or stopping of container flow. On the new unit, containers are conveyed continuously, with filling heads moving in unison with containers during the filling cycle. The machine can be equipped with cylinders and pistons for filling of any size container up to one quart. Simple operation and easy maintenance are other features reported for the new unit. Elgin Mfg. Co., Elgin, Ill.

Shippers with foam cushioning

Five stock sizes of corrugated shipping container, fitted with contour-cut K-Foam urethane cushioning, have been introduced by Katz Industries. Each size of shipper is filled completely with the compressible cushioning. The contour design of the plastic cushioning material snugly grips the packaged part and prevents it from shifting in the shipping container, says the supplier. The new shipper, which eliminates the need for additional internal cushioning, is reported to be economical as well as protective. It is designed primarily for use in the shipment packaging of delicate or fragile products. New Industrial Products Corp., Dir. Henry B. Katz Industries, East Orange, N.J.

Reinforced sealing tape

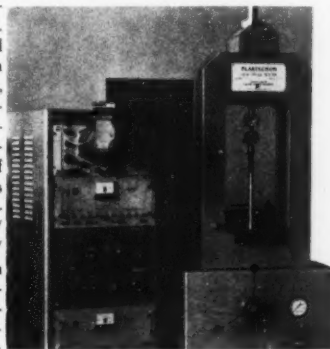
Atlantic Gummed Paper offers a reinforced sealing tape called Strippable NA-3 Padlock. The material permits easy, efficient opening of fibre boxes without the use of tear strings or other supplemental opening devices, the company notes. Because the tape peels cleanly away from container surfaces, it does not mutilate the flaps, thereby extending the life of the shipping carton. Atlantic Gummed Paper Corp., 1 Main St., Brooklyn 1.

Electronic equipment for lease

A leasing plan for electronic equipment used in food and beverage packaging has been developed by RCA. Among the equipment offered for lease is a beverage-inspection machine which electronically scans filled bottles of liquids as they pass the unit, shunting aside those containing foreign particles. Also available are machines for automatically unloading empty bottles from cases, for loading and unloading palletized cases, for holding open case lids for loading and unloading, and for cleaning bottle cases. Information on the leasing plan, which provides for pro-rated credit that can be applied toward outright purchase, is offered by Radio Corp. of America, 30 Rockefeller Plaza, New York 20.

Universal testing machine

Plas-Tech Equipment Corp. has developed a new machine which reportedly will evaluate the mechanical properties of all types of materials in both research-and-development and quality-control applications. The device, called the Plastechon Universal Tester, is capable of measuring tensile, flexural and compressive properties of materials at rates of loading ranging from 0.2 in./min. to 8,000 in./min. Stress-strain curves are obtained automatically via oscilloscope camera techniques. Among the engineering features cited for the testing machine are digital speed selection, servo response and remote-control operation. The manufacturer reports that models of this unit are already being used commercially for use in plastics and rubber studies, metals research and propellant evaluation. Additional information can be obtained from Plas-Tech Equipment Corp., Natick, Mass.



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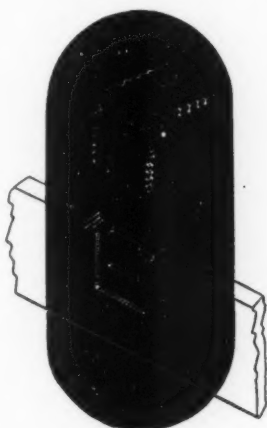
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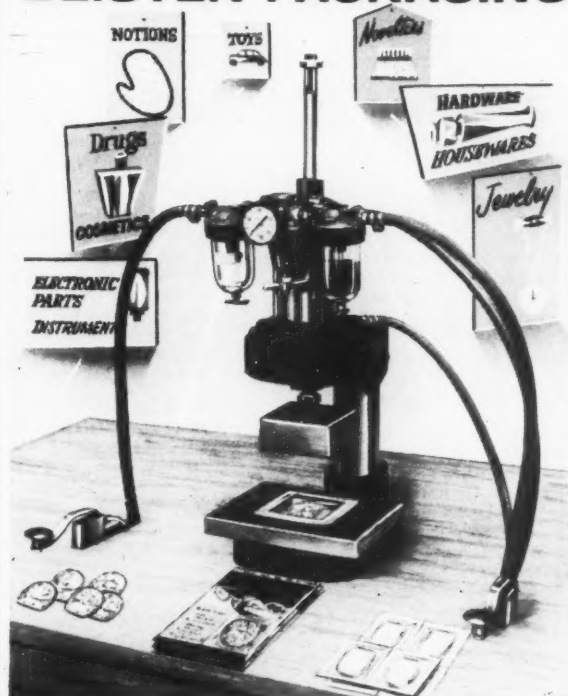
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For Your Information

Latest of the Current Industrial Reports published by the U. S. Dept. of Commerce, Bureau of the Census and Business & Defense Services Administration, covers the field of converted flexible packaging products, summarizing statistics for 1959. Manufacturers' market shipments of converted flexible packaging products, including military-specification items, amounted to \$498 million in 1959, a 9% increase over the figure reported for 1958, according to the Bureau of the Census. Copies of the new report, Series M26F-09, can be purchased for 10 cents from the Bureau of the Census, Washington 24, D. C.

Kenneth G. Scheid has been named to head the newly established Dept. of Graphic Arts in the Carnegie College of Fine Arts, Carnegie Institute of Technology, Pittsburgh. Mr. Scheid was formerly with the Wharton School of Finance & Commerce at the University of Pennsylvania and also has been associated with Forbes Lithograph Mfg. Co. The new dept. will provide a complete course of study in both graphic-arts design and graphic-arts management, preparing students for careers in advertising, packaging and related fields. Mr. Scheid is a member of several industry organizations, including the American Management Association.

Demand for fibre boxes in 1960 will be 4% above 1959 shipments, according to Peter W. Hoguet, pres. of the Econometric Institute. Speaking at a recent meeting of the Fibre Box Assn. in New York, Mr. Hoguet also predicted a 1961 gain of 9½% over the level of shipments for the first half of this year. He believes there is no possibility of a recession in 1961 and that the current quarter is the low point of the economy for the next 18 months.

Charles A. Breskin, board chairman of Breskin Publications, publisher of MODERN PACKAGING and Modern Plastics magazines, is the first recipient of the John W. Derham gold medal award, presented by the Plastics Institute of Australia. The award, for "outstanding services to the world of plastics," was presented to Mr. Breskin Sept. 19 in Sydney. It will henceforth be given on a biennial basis by PIA.

There are 15 product classifications in this year's Aerosol Package Awards contest, including three new ones which have become major sales categories in recent years. The addition of the automotive, veterinary and pet products, and horticultural products categories reflects the continuing sales rise of the industry—575 million units in 1959—according to Chemical Specialties Mfrs. Assn., sponsor of the contest. Entries must be submitted by Oct. 15 to CSMA head-

quarters at 50 E. 41 St., New York. Announcement of winners will be made at CSMA's 47th annual meeting in Hollywood, Fla., Dec. 5-8.

The Packaging Institute recently distributed its latest, revised "List of Publications of the Packaging Institute 1960." The 46-page, looseleaf booklet covers books, special reports, advisory service reports, forum publications, authorized test procedures and committee reports. Additional copies may be obtained upon request to PI headquarters at 342 Madison Ave., New York.

Atlantic Gummed Paper Corp. has made available a time and motion study comparing the relative efficiency of four different methods of closing corrugated containers—reinforced tape, gummed tape, hand stapling and gluing. The study, a condensed report made by Container Laboratories, may be obtained without charge from Atlantic Gummed Paper Corp., 1 Main St., Brooklyn.

The Packaging Machinery Mfrs. Institute reports that it is offering increased facilities for display of packaging machinery at its next show. The biennial PMMI show is to be held at Cobo Hall in Detroit, Nov. 7-10, 1961. Application for exhibitor space should be made to Hanson & Shea, Inc., 1 Gateway Center, Pittsburgh.

Canning contractors and bottling companies interested in entering the canned-soft-drink market will find useful data in a new guidebook available from Continental Can Co. "The Canning of Carbonated Beverages," a 28-page, ring-bound brochure, treats the subject of canning carbonated, non-alcoholic beverages in detail, including can structure, filling and sealing methods and machines. Copies may be obtained without charge from Concan at 100 E. 42nd St., New York 17.

The sixth international packaging exhibition—organized by N. V. t Raedthuys, Amsterdam—will be held May 2-9, 1961, in Amsterdam. Applications for space at "Macropak" are now being accepted by Verpakkingsbeurs, Tesselshadestraat 5, Amsterdam, Holland.

"De-inking Today and Tomorrow" is the theme of the 5th De-inking Conference sponsored by the Technical Assn. of the Pulp & Paper Industry. It is being held Oct. 4-6 at Appleton, Wis., under the chairmanship of J. D. Allen of Bergstrom Paper Co. Topics to be discussed at the conference will be the economics and the future of de-inking.

Two researchers in radiation have collaborated in presenting the basic principles of ionizing radiations and their present and probable applications in

food processing and preservation, and in horticultural, agricultural and biological research. Norman W. Desrosier, professor of food technology at Purdue University, and Henry M. Rosenstock, senior radiation scientist of the Wm. H. Johnston Laboratories, are the authors of *Radiation Technology in Food, Agriculture and Biology*, a 400-page book setting forth the practical details of the technology of radiation. It includes a chapter on the effects of radiation on packaging materials. The book is available from The Avi Publishing Co., Westport, Conn., for \$12.50 (domestic) and \$13.50 (foreign).

The Produce Packaging Assn. held its 10th annual convention and exposition at the Americana Hotel in Miami Beach, Sept. 11-14. A highlight of the meeting was a report on a successful new prepackaging center, the plant of Triple M. Packing Corp. in Philadelphia. LeRoy M. King, editor of *Food Topics and Food Field Reporter*, spoke on "The Supermarket Operator Takes Another Look At Packaging."

A 10-page report describing technical specifications for corrugated-container glue-lap production, and including a review of synthetic resin emulsion glues designed for this purpose, is offered by

Events

- Oct. 3-7—Brewing, Bottling & Allied Trades Exposition, London, England.
- Oct. 14-23—French Packaging Institute, Autopac, First International Packaging Machinery Show and 14th French Packaging Show, Paris.
- Oct. 17-21—1960 Metals Show, Convention Hall, Philadelphia.
- Oct. 19-26—Plastics Research Institute, second International Plastics Exhibition, Utrecht, Holland.
- Oct. 23-26—National Frozen Food Assn., merchandising convention, Statler Hilton, New York.
- Oct. 27-28—American Society of Industrial Designers, 16th annual conference, Edgewater Beach, Chicago.
- Oct. 28-Nov. 2—National Automatic Merchandising Assn., 14th annual convention, Exhibition Hall, Miami Beach, Fla.
- Oct. 31-Nov. 2—Packaging Institute, National Packaging Forum, Statler Hilton, New York.
- Nov. 1-3—Point-of-Purchase Advertising Institute, 14th annual symposium and exhibit, New York Coliseum.
- Nov. 1-3—Packaging Assn. of Canada, 9th Canadian National Packaging Exposition, Automotive Bldg., Exhibition Park, Toronto.
- Nov. 14-17—International Exposition of Soft Drink Industry, Cobo Hall, Detroit.

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Above: View of Southern Mill and Converting Plants at St. Marys, Georgia, indicating new 300,000 sq. ft. multiwall and grocery bag converting plant.

Left: View of Northern Mill and Converting Plants at Gilman, Vermont.

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CEdar 3-5414

F.Y.I. [Continued]

Borden Chemical Co. The report lists structural requirements for glue-lap adhesive products, machining or operational characteristics, basic adhesive types and a description of the effect of high temperatures and shearing stress. It also includes product-specification data. Copies of the report may be obtained, without charge, by writing to Dept. H, The Borden Chemical Co., 350 Madison Ave., New York 17.

Arthur L. Harris, v.p. of Mead Corp., was featured speaker at the July 28 luncheon-meeting of the California Packaging Club in Los Angeles. "Packaging Here and Abroad" was Mr. Harris' theme, and he treated at length the basic differences in merchandising concepts between the U. S. and Europe, with particular reference to the current domestic trend toward multipackaging. According to Mr. Harris, the only foreign area where supermarket merchandising, as we know it, has been adapted to any extent is Scandinavia, primarily Sweden. Scandinavia also is the chief source of pulp in Europe, said Mr. Harris. In his opinion, it will be seven to eight years before heavy capital investment by U. S. packaging companies in the European market will be warranted. Until that time, careful choice of location, keeping basic raw-material needs in mind, is probably the only alternative to working with currently established concerns in Europe, according to the speaker.

The summer issue of "Package Laboratory News," published quarterly by the Hinde & Dauch Div. of West Virginia Pulp & Paper Co., is devoted to articles providing across-the-board estimates of the value of pre-shipment testing. Comments on the subject from authorities in all modes of transportation and from the head of a school of packaging are gathered in the illustrated, color-printed booklet covering 15 pages. In the booklet, James W. Goff of Michigan State University School of Packaging writes about the growth of package testing, and gives an appraisal of its future.

The Grocery Manufacturers of America reports that food manufacturers have joined forces with the U. S. Dept. of Agriculture and GMA in an effort to acquaint European consumers with American food products. Nearly 100 companies supplied more than 1,000 individual items of canned, packaged and frozen foods to the U. S. processed-food exhibit at two international food fairs held during September—the British Food Fair in London, and the IKOFA International Exhibition of Groceries and High Class Provisions in Munich.

A brochure titled "Bin Boxes" has been published by the National Wooden Box Assn. as a guide to lower handling costs in industry and agriculture. Based on information gathered from many sources, the manual lists important fac-

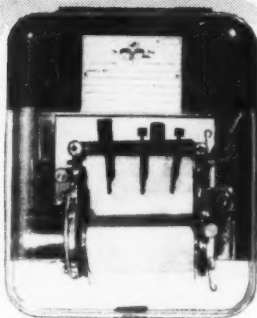
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F.Y.I. [Continued]

tors to be considered in the design of effective, high-capacity handling containers for specific applications. The illustrated, color-printed 12-page booklet may be obtained from any NWBA member company or from the association, 402 Barr Bldg., Washington, D. C.

Raymond E. Hess has been named acting exec. secy. of the American Society for Testing Materials. Robert J. Painter, exec. secy. since 1952, is now consultant to the exec. secy. He will continue as treas. of ASTM. At the society's annual meeting held in July, Dr. A. Allan Bates of Portland Cement Assn. succeeded to the presidency. The next semi-annual meeting of ASTM's Committee F-2 on Flexible Barrier Materials is to be held Nov. 3 at the Statler-Hilton in New York. ASTM's Committee D-20 on plastics has drawn up a new specification for PVC and has issued new definitions for elastomer and rubber, reportedly to alleviate confusion of these materials.

The National Paper Box Mfrs. Assn. held its divisional fall meetings in September. The West and Midwest Divs. convened at St. Clair, Mich. The Central-Metropolitan Divs. met at Split Rock Lodge in the Poconos. The Southern Div. held its meeting in Asheville, N. C., also the occasion of the directors' board meeting. Cooperstown, N. Y., was site of the Empire Div.'s meeting.

The Hidden Persuaders raised serious questions about the value and justification of the science of motivation—the psychological techniques that, among other things, influence consumers' buying decisions. Billed as an answer to that provocative book is *The Strategy of Desire*, by Ernest Dichter, pres. of The Institute for Motivational Research, Croton-On-Hudson, N. Y.

In his new book, Dr. Dichter tells how social science can be and has been applied to the problems of human motivations in order to achieve desirable goals. The book deals specifically with the techniques of persuasion and communication in the manipulation of human desires. Specific case histories and general conclusions provide insight into such mysteries as consumers' emotional reactions to advertising or selling messages. The book also makes the point that people want and need guidance in making buying decisions. Dr. Dichter clarifies this point succinctly: "Most of us will claim that we resent high-pressure salesmen. Yet when the salesman stops selling and tells us to choose rationally, we feel let down and downright insulted by his indifference."

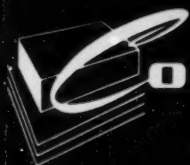
The Strategy of Desire contains 314 pages and is priced at \$3.95. It is published by Doubleday & Co., 575 Madison Ave., New York 22.

The Institute of Packaging of Great Britain has occupied new premises. The institute's new address is Malcolm House, Empire Way, Wembley Park, Middlesex.

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U. S. Patents Digest

This digest includes each month the more important patents of interest to packagers. Copies of patents are available from the U. S. Patent Office, Washington, D. C., at 25 cents each in currency, money order or certified check. Postage stamps are not accepted. Edited by H. A. Levey.

Container Closure and Applicator, Stanley Lowen, Yonkers, N.Y. U.S. 2,943,338, July 5. In the combination of a container for a commodity having an egress opening and a plastic closure member for said opening removably mounted on said container, an elongated, flexible applicator blade integral with and extending outwardly from said closure member.

High-Speed Packaging Machine, John H. Stroop (to Vol-Pak, Inc., New York, a corporation of New York). U.S. 2,943,428, July 5. A high-speed packaging machine having a pair of webs brought together and sealed around each object packaged, wherein said webs are subjected to a timed pre-forming pocket-deformation means.

Method of Making a Spiral-Wound Container, John Kenneth McBain (to W. C. Ritchie & Co., Chicago, a corporation of Illinois). U.S. 2,943,540, July 5. The method of producing a spirally wound container from at least two strips of flexible material in a substantially continuous process; the container being characterized by a cylindrical wall having major portions thereof transparent.

Conveyor for Packages, Marchand B. Hall and Alvin L. Winkler (to Acme Steel Co., Chicago, a corporation of Illinois). U.S. 2,943,558, July 5. Apparatus for use in the binding of objects of varying width, comprising a conveyor, means for actuating said conveyor, and a series of guide members mounted on said conveyor to extend transversely of said conveyor.

Protective Packaging, Alfred D. Brown (to Fellowcraft Engineering, Inc., Newark, a corporation of New Jersey). U.S. 2,943,731, July 5. Means for suspending an article within a container, comprising a pair of pliable sheet members, each having a central section for holding an article between them.

Container, Thomas Harris (to Structural Fibers, Inc., Chardon, O., a corporation of Ohio). U.S. 2,943,758, July 5. A container comprising an assembly of a generally rectangular bottom panel and four generally rectangular, adjoining side wall panels, said bottom panel including an upwardly directed, continuous, peripheral flange integrally joined thereto by a fillet portion of substantial radius.

Carton, James A. Richardson (to Unipak Cartons Ltd., Vancouver, B. C., Canada, a corporation of British Columbia). U.S. 2,943,763, July 5. A multi-cell carton formed from a one-piece blank having a plurality of panels disposed in side-by-side relation, said car-

ton having a wall structure formed by selected ones of said panels to define side and end walls and a bottom.

Combined Container and Measuring Spout, Milton H. Klausmann, Henry J. Brucker and Raymond P. Von Culin (to Seal-Spout Corp., Mountainside, N.J., a corporation of New Jersey). U.S. 2,943,769, July 5. The combination of a container having a substantially rectangular discharge aperture in one wall thereof and a tongue that comprises the part of said wall that was displaced to form said aperture and is integrally hingedly connected to said wall.

Dispensing Carton, Kenneth T. Buffery (to KVP Sutherland Paper Co., Kalamazoo, a corporation of Delaware). U.S. 2,943,779, July 5. A dispensing carton formed of an integral blank and comprising side walls and end walls provided with coating bottom closure members, the side walls having overlapping side top closure members.

Recessed Automatic-Bottom Carton, Hubert V. Bolding (to Standard Packaging Corp., New York, a corporation of Virginia). U.S. 2,943,780, July 5. A single-blank collapsible carton comprising four outer walls permanently hingedly connected together to provide a continuous and collapsible outer wall structure, all of said hinge lines between adjacent walls being parallel.

Forming Containers, Francis J. Sloan (to Package Machinery Co., East Longmeadow, Mass., a corporation of Massachusetts). U.S. 2,944,295, July 12. The method of forming oriented plastic sheet material into container form, comprising the steps of impressing a pattern of disappearing hinge lines on a blank of such material by simultaneously contacting one side of the blank with a plate heated to a temperature just below material-distortion temperature.

Method for Handling Cans, Earl E. Jeremiah (to United Can & Glass Co., Hayward, Calif., a corporation of Delaware). U.S. 2,944,688, July 12. The method of storing cans in a storage bin comprising the steps of introducing the cans into the top of said bin on a substantially level conveyor.

Collapsible Container and Dispensing Holder Therefor, Alfred A. Moore, San Gabriel, Calif. U.S. 2,944,706, July 12. A dispensing device for use in dispensing a stream of fluent plastic material from a collapsible container mounted therein and for distributing the dispensed stream.

Retainer for Use on Collapsible, Squeeze-Type Container, Frederick W.

B. Smeaton, St. John's, Newfoundland, Canada. U.S. 2,944,708, July 12. A dispensing device comprising a metallic member of frusto-conical form adapted to serve as an outlet means for a container, said member including a tubular portion open at one end and closed at the other end.

Detachable and Foldable Container Carrier, Frank A. Beach, Three Rivers, Mich. U.S. 2,944,713, July 12. A detachable and foldable carrier for containers, having opposed finger slots on the opposite sides thereof for lifting the containers; comprising two arms for nesting with each other when the carrier is in folded position, each consisting of flat, broad metal material and having an inwardly extending lower portion.

Package, John G. Vergobbi (to Pneumatic Scale Corp., Quincy, Mass., a corporation of Massachusetts). U.S. 2,944,715, July 12. A package comprising a liner bag formed from a sheet having a relatively thin coating of thermoplastic material on the inner face thereof and having a heat-sealed face-to-face longitudinal side and a heat-sealed face-to-face transverse end closure seam.

Tray Package and Method of Making It, Walton D. Lynch (to Baljak Corp., Wilmington, a corporation of Delaware). U.S. 2,944,717, July 12. A merchandise package comprising a tray having a bottom and outwardly flared sides terminating at a rim extending, in plan view, beyond the boundaries of the tray bottom, and also including an enclosing paperboard box.

Multicellular Folding Box, Marshall L. Williamson (to Federal Paper Board Co., Bogota, N.J., a corporation of New York). U.S. 2,944,718, July 12. A cellular folding-box structure for the packaging of articles of substantially cylindrical cross-section, such as cans, bottles, jars, light bulbs and the like.

Container, Edwin L. Arneson (to Federal Paper Board Co., Bogota, N.J., a corporation of New York). U.S. 2,944,719, July 12. A container formed of a single blank of relatively flexible and bendable sheet material which is covered on one face with relatively thin aluminum foil, said container comprising when erected a foil-lined tray-like member having a bottom, upstanding side walls which are integral with the side edges of said bottom and upstanding end walls.

Carton, David Levkoff, Great Neck, N.Y. U.S. 2,944,720, July 12. A carton having a bottom provided with a rectangular, centrally located aperture, upstanding side walls and end walls, each

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positive moisture barrier, helps seal out moisture to maintain the proper biscuit firmness. And the gleaming foil overwrap, designed by **Raymond Hoagland and Associates** of Chicago, helps hurrying housewives identify the Gerber package on crowded store shelves.

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Patents (Continued)

of the side walls consisting of two plies, with the innermost ply of each side wall terminating at a point above the bottom.

Interlocked Carton, Joseph A. Marino and Louis Mayer (to Owens-Illinois Glass Co., Toledo, a corporation of Ohio), U.S. 2,944,723, July 12. A carton construction formed of a single piece of relatively stiff, sheet-like material, said construction comprising a bottom wall of rectangular configuration defined by opposed parallel side edges and opposed parallel end edges.

Carton with Snap-Lock Closure, Norman H. Moore (to Fibreboard Paper Products Corp., San Francisco, a corporation of Delaware), U.S. 2,944,727, July 12. A carton comprising a main body part having a cover panel, and a first and second pair of opposite upright side walls hingedly connected to said cover panel with edges of said first and second pair of upright side walls defining an open mouth.

Liquid Container and Applicator, Arthur G. Martineau, Jr. U.S. 2,945,252, July 19. In a combined liquid container and applicator, a hollow, compressible body member open only at its upper end, and a nozzle member forming a top closure for said body member and having an axial passage which passes therethrough.

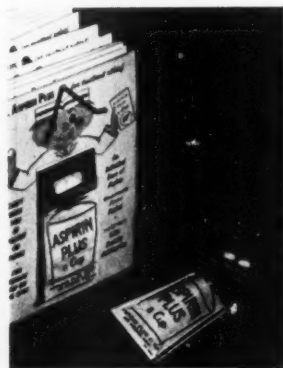
Procedure for the Manufacture of Tubular Containers, Teresa Mainardi, c/o Ing. Armando Giambrocco, Milan, Italy, U.S. 2,945,266, July 19. A process for the manufacture of plastic containers from a plastic tube, comprising the steps of inserting a cap into a mold having an opening formed in its bottom for the passage of plastic material and a shoulder portion, said mold fitting loosely said cap and having said bottom provided with projections so as to space the cap from the bottom.

Machine for Packaging Soft Print Butter, Arthur Perrault (to Burch O. Gustafson, White Bear Lake, Minn.), U.S. 2,945,334, July 19. In a butter-packaging machine, means for positioning a carton blank in a substantially vertical plane, means movable into an adjacent relation with a portion of one face of said carton blank, said second-mentioned means having upper and lower edges about which said carton blank is to be bent.

Reclosable Plastic Bubble Package, Harold Mackes (to Binney & Smith, Inc., New York, a corporation of Delaware), U.S. 2,945,586, July 19. Reclosable plastic bubble package construction comprising: a frame element having an opening, a body element receivable in said opening, said body element having a free edge with a raised lip-space from said frame element forming an entrance to said body element.

Method and Apparatus for Feeding Elongated Objects from a Container, Benjamin F. Gerding and Anthony F. Labrozzi (to International Resistance Co., Philadelphia), U.S. 2,945,613, July 19. Apparatus for feeding elongated objects from a container in which they are arranged substantially parallel to one end thereof, comprising the combination of holding means for the con-

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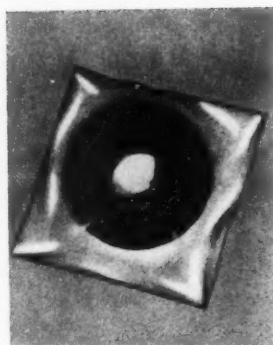
One-piece Aspirin-and-Chaser pack

A package of aspirin is no cure for a headache, until a man can get the tablets *inside* him. This is the reason for the unique aspirin and water-cup packet produced by Standard's *Modern Packages Division*. An envelope made of cellophane and polyethylene is heat-sealed into two compartments. The upper contains two aspirin tablets. The lower tears off to form a drinking cup. Packs are attached to printed hang cards and displayed on wire counter racks. "Selling on sight," stores say.



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Patents [Continued]

tainer comprising a substantially rectangular bottom plate on which the container is adapted to sit and which is tilted so that its front end is lower than its other end.

Bag Closure and Opening Device. Elmer C. Swanson, Larchwood, Iowa. U.S. 2,945,615, July 19. A bag closure and opening device comprising a pair of stitching cords stitched along a normally opening end of a bag, one of said cords passing through the bag plies and including integral loops.

Method of and Machine for Forming Packages. Omer E. Cote (to United States Automatic Box Machinery Co., Boston, a corporation of Massachusetts). U.S. 2,946,165, July 26. In a packaging machine, means for successively forming flat blanks having adhesive applied to selected areas thereof about the bottom and sides only of articles to be packaged.

Poultry-Packaging Machine and Method. Thomas R. Baxter (to Continental Can Co., New York, a corporation of New York). U.S. 2,946,166, July 26. A poultry-bagging machine comprising a support and a hollow, tapered, expandable horn mounted on said support and of a size to be expanded by forcing of a dressed chicken or other fowl therethrough.

Plastic Folders and Like Containers for Flat Articles. Walter Lennartz, Dachau, Germany. U.S. 2,946,363, July 26. A folder made from thermoplastic material, comprising a seamless body of thermoplastic material having a pair of cover parts integrally joined by a centrally disposed reinforced ledge, said ledge being pre-loaded to be under tension so as to urge said cover parts to ward each other.

Display Carton. Russell J. Hennessey (to Waldorf Paper Products Co., Ramsey County, Minn., a corporation of Minnesota). U.S. 2,946,433, July 26. A display carton including a rectangularly arranged front, rear and side panels secured in tubular relation, a partition panel connecting said side panels between and parallel to said front and rear panels, said partition panel having a generally rectangular aperture therethrough which is spaced from the edges of the partition panel.

Container with Opening Means. Ernest Brina (to Scientific Packaging Corp., Jersey City, a corporation of New Jersey). U.S. 2,946,434, July 26. A filled bag consisting essentially of a front wall and a back wall, each comprised of a thickness of tough plastic film with the edges of said front and back walls sealed, and means to facilitate cutting of the bag, comprising a strip of material stiffer and more resistant to tear than the said film.

Multicellular Folding-Box Structure. Marshall I. Williamson (to Federal Paper Board Co., Bogota, N.J., a corporation of New York). U.S. 2,946,436, July 26. A merchandise package unit of cans, jars and similar receptacles, the package comprising a plurality of receptacles of a certain height arranged in line, and a multicellular box of paper

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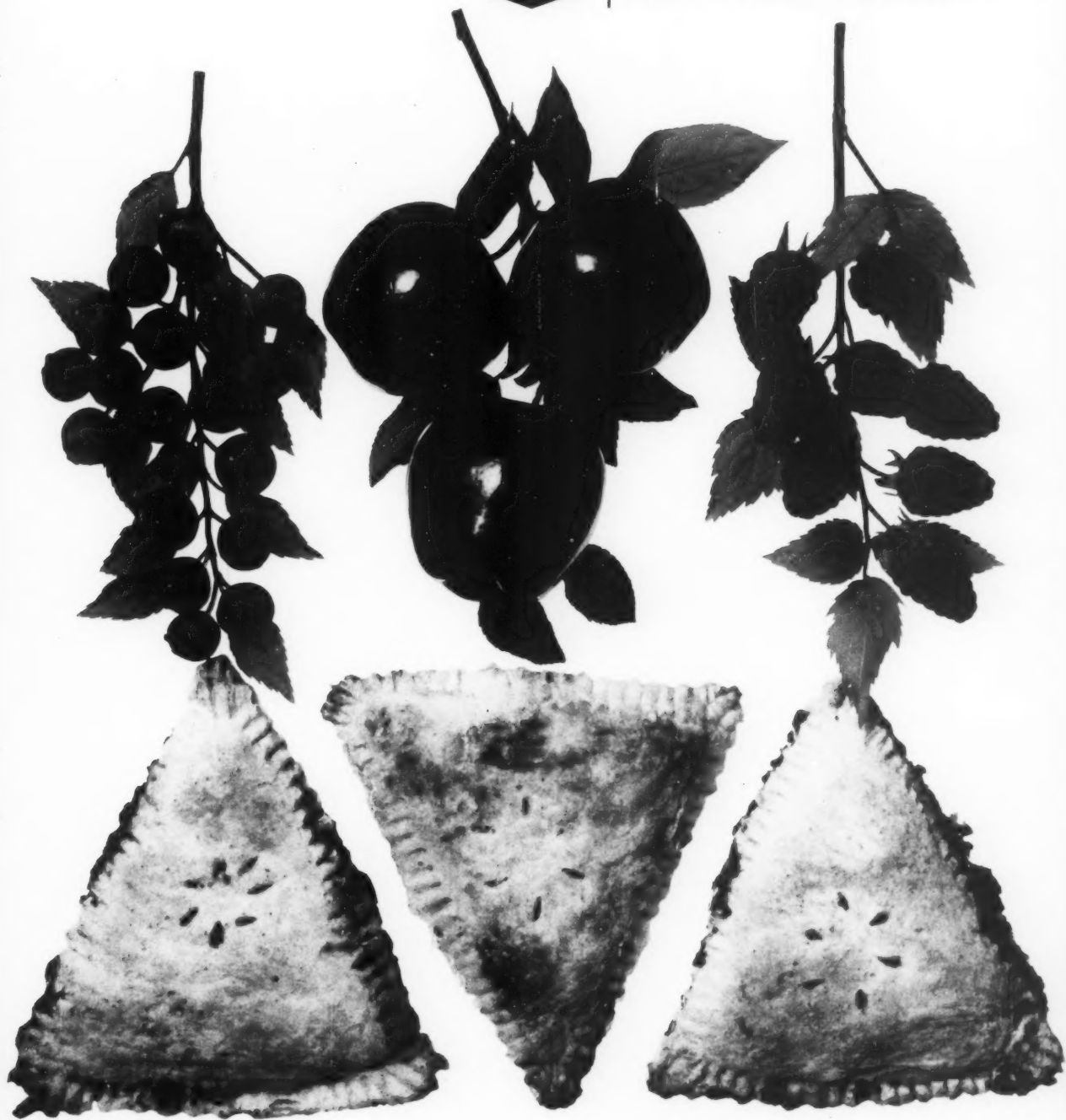
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Patents [Continued]

board of a lesser height than said receptacles and which engages one end of the said receptacles.

Package Support, Harold S. Meyers (to Waldorf Paper Products Co., St. Paul, a corporation of Minnesota), U.S. 2,946,455, July 26. A package support for displaying a series of packages, including a hollow rectangular tubular member having closely spaced top and bottom members and connecting side walls.

Grip-Finger Assembly for Labeling Machines, Sidney T. Carter (to Geo. J. Meyer Mfg. Co., Cudahy, Wis., a corporation of Wisconsin), U.S. 2,946,472, July 26. A bottle-labeling machine of the kind wherein a gum-coated picker removes a body label and a shoulder label simultaneously from a supply and carries them to a transfer station where both body and shoulder labels are disposed in the same plane.

Opening Means for Sealed Containers, Verne Clair, Jr., and Stanley A. Zysk (to Kelsey-Hayes Co., Detroit, a corporation of Delaware), U.S. 2,946,478, July 26. In combination with a sealed container having at least a wall portion consisting of cold-pressure-weldable metal, means for producing an opening in said container comprising a tearing tag or the like detachable member also being comprised of a cold-pressure-weldable material.

Container, Ralph L. Kuss (to R. L. Kuss & Co., Findlay, O., a corporation of Ohio), U.S. 2,946,494, July 26. A container comprising a carton, a bag having upper corners and an opening in a side wall thereof, means forming a flange around said opening.

Carton, Arthur F. Stagmeier (to General Foods Corp., White Plains, N.Y., a corporation of Delaware), U.S. 2,946,496, July 26. A carton having side and end wall panels, extensions on said panels forming top closing flaps for said carton, said top closing flaps including side and end flaps.

Multicellular Folding-Box Structure, Marshall I. Williamson (to Federal Paper Board Co., Bogota, N.J., a corporation of New York), U.S. 2,946,498, July 26. A folding-box structure for the packing of light bulbs, comprising in combination a pair of opposite side walls and a cellular top structure between said side walls.

Handle for Multicellular Folding Boxes, Marshall I. Williamson (to Federal Paper Board Co., Bogota, N.J., a corporation of New York), U.S. 2,946,501, July 26. A self-engaging, strap-type handle for foldable sheet material, particularly for use with multicellular folding-box structures, the handle comprising a pair of substantially vertical handle panels folded in substantially the shape of an inverted U.

Single-Can Carrier, Marshall I. Williamson (to Federal Paper Board Co., Bogota, N.J., a corporation of New York), U.S. 2,946,620, July 26. A carrier for a single chime-end can or similarly shaped receptacle, the carrier consisting of a single blank of paper-board and being comprised of a pair of opposite side walls.

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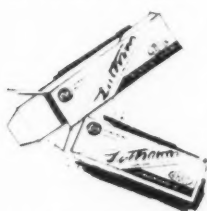
Like any other packaging material you may consider, polyethylene coatings must meet the basic tests of protection, production and price. The dynamic growth of the use of polyethylene coated substrates during the past few years is cogent evidence that polyethylene coating resins do indeed satisfy these needs.

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polyethylene coatings for your packages?

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speeds. A folding carton coated by this process makes a highly effective single-ply barrier. Or consider the advantages of a coating of polyethylene inside a large industrial drum—the resistance to moisture makes these drums ideal for shipping liquids and wet solids, while the entire construction permits considerable weight savings and reduced shipping costs.

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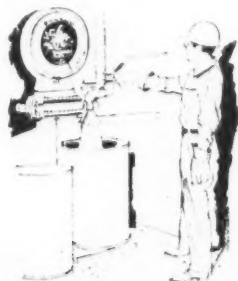
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Glue sealing with polyethylene coatings

[Continued from page 138]

better humidity resistance than highly converted dextrans. Animal glues are second lowest in cost and apparently the least sensitive to treatment of the three non-tacky adhesives types.

Indications are, however, that the animal glues have lower humidity resistance than polyvinyl acetate adhesives, particularly as temperatures increase. The decision as to what non-tacky glue to use ultimately depends on which offers the best combination of cost, machinability and specific end-use performance.

6. Over-all ratings—tacky adhesives. Significant differences in the bond properties of the various tacky adhesives were observed. Some tacky adhesives showed excellent room-temperature resistance to cold flow in shear. This is an important indication that they may be commercially practical for the construction of containers from polyethylene-coated paper and paperboard.

The aqueous dispersion, Adhesive G, showed the most suitable characteristics of the various tacky materials investigated, providing reasonably strong bonds even when applied to paper coated with a very high-slip polyethylene. Adhesive G, a tacky adhesive, is competitive in price with two of the non-tacky glues—the polyvinyl acetate emulsions—and its performance is better. The emulsion adhesive listed as C gave relatively low bond strength, while Adhesive D developed tack more slowly than G and did not resist aging so well. Also, G has the important advantage of good adhesion to untreated or weakly treated polyethylene.

Adhesive G shows excellent resistance to cold flow and, since no major price advantage is offered by any of the other tacky adhesives, Adhesive G could be considered particularly suitable for polyethylene-coated paper and paperboard. This is assuming, of course, that its machining properties are adequate, as is to be expected.

Conclusion on commercial packaging adhesives. The findings of this study re-emphasize the potential of polyethylene-coated paper and paperboard as a packaging material. The fact that commercially available glues, both tacky and non-tacky, can be used effectively to bond a poly-

ethylene surface with a paper surface offers packagers convenient and economically practical opportunities for improved package performance. Many of the markets which use multiwall shipping bags and folding cartons may find glue-sealed polyethylene-paper combinations particularly valuable.

It should be kept in mind that the polyethylene-to-porous-surface glues discussed in this article are not intended for use with two non-porous surfaces such as polyethylene to polyethylene.

Improved dextrin adhesives

Tests of improved dextrin packaging adhesives were conducted in two phases. Initially, bonds were made with both the unmodified dextrin adhesive and a mixture of 14% animal glue in dextrin. A roll of 60-lb. natural kraft paper, extrusion coated with 1-mil DFD-3200 polyethylene, half of which was flame treated and half electrically treated, was used for all tests. In each case the adhesives were applied with a No. 24 R.D.S. wire-wound rod and allowed to set at room temperature for one week before bond strength was tested. The materials used in these tests were:

Borated dextrin

Liquid animal glue

Kraft paper, natural, 60 lb.

Polyethylene compound (Bakelite brand Polyethylene DFD-3200)

Representative results of adhesion tests for both the unmodified dextrin adhesive and the dextrin modified with 14% of liquid animal glue are shown in Figures 3 and 4. In both the flame and electrically treated series, the latitude was very critical for areas of good adhesion when the unmodified dextrin was used as the adhesive. Where the dextrin was modified with 14% by weight of a liquid animal glue, the treating latitude was much broader. Also, the bond strength obtained with the mixture was greater than the strength attained with the unmodified material.

A second series of tests was designed to determine whether or not the amount of animal glue used to modify the dextrin was a critical factor. Tests similar to the series described above were run using

dextrin adhesives modified with between 14% and 10% of animal glue. The data for these tests appear in Figure 5. The results of this series showed no significant variations between the different modified formulations with respect to adhesion or treating latitude. All of the modified adhesives, however, did show significantly wider treatment latitudes than unmodified dextrin adhesive.

Conclusions on improved dextrin packaging adhesives. As polyethylene-coated paper and paperboard have found increased use in the packaging field, packaging fabricators have had need for a series of machinable, low-cost adhesives with high bond strength which perform well over a wider range of surface-treatment conditions. The experiments have shown that a standard borated dextrin packaging adhesive, modified with a small percentage of liquid animal glue, will produce definitely improved adhesion to both flame and electrically treated polyethylene-coated webs and over a wide range of treating conditions.

Because of time limitations, all types of dextrin adhesives and animal glues could not be tested. Undoubtedly, there are other commercial materials of these types that perform equally well. ●

Blister economy

[Continued from page 105]

applicator for a children's liquid vitamin product.

If, for instance, White Shield wants to increase the production of blisters for 4-oz. bottles because of the popularity of the product in this size package, more cavities in this size can be added and those of other sizes decreased. Arrangement on the sheet, of course, depends on the most efficient heating pattern.

This method is particularly advantageous, it is pointed out, for a small company, just starting out, which doesn't know which items will prove to be the fastest sellers.

If greater volume is required later, molds in which all cavities are the same can be tooled to meet requirements. And White Shield anticipates this will be the case as its super-market distribution increases. ●

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stand-out from all compe-
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YES ☐ NO ☐

Do your containers
make your product look
like it's worth the price?

YES ☐ NO ☐



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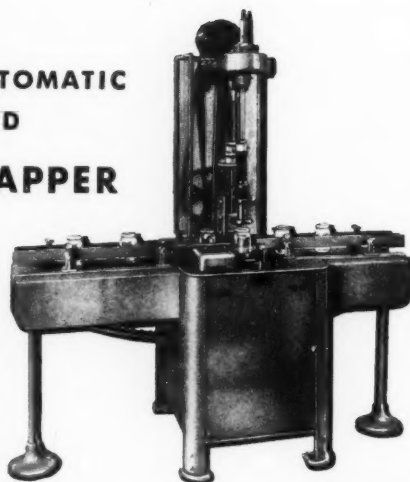
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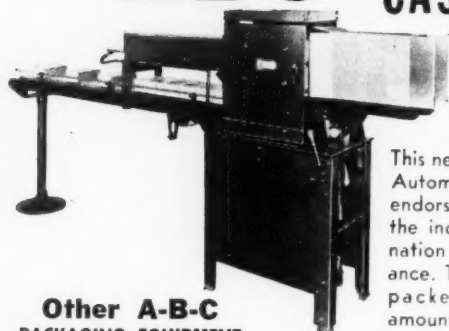
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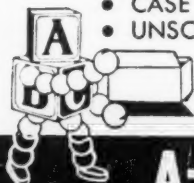
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Foamed plastics rise

[Continued from page 101]

decanter is floated between two split blocks of foam mortised into the strips of foam lining the package, preventing any movement of the fragile ceramic item.

While previous types of polystyrene foam have been rigid, new techniques of forming have produced resilient sheets of this truly versatile material that may open up vast new packaging applications. Made in thicknesses of from 10 mils to 6 in., this low-cost plastic foam should enable polystyrene to enter the field of industrial packaging where only flexible polyurethane has gone before. And these foams should also find many applications in packages that now use only paper or paperboard. Tubes, foam-paper laminations and insulated bags are three highly possible uses. One supplier reports that his sheet has won approval for food uses from FDA.

New as this type of material is, one extruded 10-mil polystyrene foam has already achieved commercial application as a canister. Laminated in two thicknesses for extra strength, it is spiral wound into canister bodies capped with die-formed ends of the same material and used as a soluble package for activated carbon made by General Clarifier Corp., Brooklyn. It is intended for the dry-cleaning industry, because polystyrene is soluble in the perchloroethylene fluid used by many cleaners; the package can be dropped directly into a surge tank. The foam sheet made this package possible, since the amount of polystyrene that can be allowed in a cleaning solution is critical and the foam contains far less resin than a thermoformed package of equivalent volume and strength made of conventional sheet.

A new lamination of thin expandable polystyrene foam sheet and paperboard, just announced, may have a great significance in barrier packaging. Now under test by a major manufacturer of soaps, the stiff lamination is waterproof, reduces the weight of paperboard needed in these folding cartons and provides a glossy white outer surface that is said to be superior in appearance to lightly clay-coated boards. A new lamination of em-

² See "Resilient Foamed Polystyrene," MODERN PACKAGING, Aug., 1960, p. 119.

bossed expandable foam sheet and paper is said to be competitive in price and protection to glassine and paper pads used for candy boxes.

Economical foams of greater thickness are under test in several industrial shipping applications for sensitive instruments, missile components and electronic parts.

While polyurethane foams are more expensive than the polystyrene materials, they were—up until the new flexible polystyrene materials came along—the only packaging foams with outstanding resilience. They still lead in this respect. They can be made as soft as fine foam rubber or as hard as the rigid polystyrenes and in almost any intermediate stage. Being non-abrasive and non-dusting, this foam is ideal for packaging instruments* or finely finished metal and glass parts.

One tremendous advantage of polyurethane is its ability to be foamed in place at room temperature. In this technique, a catalyst is mixed with the resin and poured into a container (generally corrugated) in which the product has been positioned. In a few minutes, the foam

rises around the product, conforming to its shape and filling the outer package. This almost indestructible suspension system has been used virtually to eliminate breakage of many delicate electronic parts. The foam can also be had in sheet form or pre-molded to close tolerances.

However, to reduce packaging costs with this material, new suspensions have been devised that substantially decrease the amount of polyurethane foam needed in a package, yet preserve the high cushioning power of this material.

A dramatic case in point is a new diaphragm suspension package, now being tested by RCA for electronic tubes, that standardizes containers for these fragile units and eliminates the wide range of specially designed packages needed previously to hold polyurethane pads, which were custom molded for each different tube. The first of the new packages, capable of affording 20-G protection for products up to 20 lbs. under 30-in. drop conditions, has reduced the cost of packaging one electronic tube by 30%. Cubage has been reduced 82%.

The tube is placed in a small corrugated carton, with any shredded material that will fill in the space.

The real cushioning, however, comes from a centered ring of foamed-in-place polyurethane about 2 in. thick surrounding the small carton and floating it within a larger, outer corrugated box. Polyurethane foam adheres to both containers, giving a spring-like cushion in all planes.

Here, shear, tension and compressive loadings are all employed to utilize the excellent tensile strength, bonding characteristics and damping features of polyurethane foam. When the container is upright, the diaphragm of foam is loaded in shear. When the package is on its side, the foam on the bottom is in compression, while that on top is under tension and the side sections are under shear. The diaphragm is also placed slightly over the center of gravity so that side drops also use the power of rotation to absorb energy.

These are the foams and applications that are setting the pace today for the packaging field. Because many of these foams have been on the market for only a few months, new techniques and applications can be expected to pyramid as packagers discover more functional and decorative ways of handling the featherweight plastics. ●

*See "Foam Cradle for Fragile Products," MODERN PACKAGING, June, 1958, p. 114.

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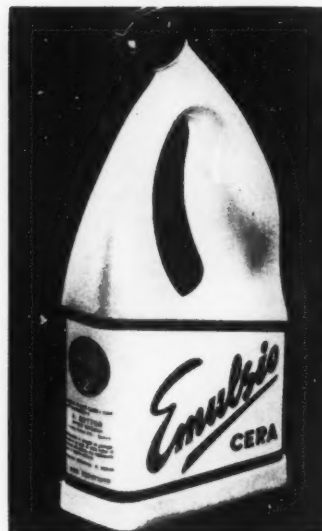
Italian 'Oscars'

Award-winning entries in the "Packaging Oscars 1960" competition, sponsored by the Italian Packaging Institute, evidence sales-sparking design and construction well worth the attention of American packagers and designers.

Among the top award winners was an unusual blown polyethylene squeeze-to-use container (see photo) for A. Sutter's Emulsio liquid floor wax, in which a "built-in" handle also serves as a dispensing function. An opening in the body of the rectangular-based container provides for convenient gripping and squeezing of the bulbous handle.

Another "Oscar" winner was a diamond-shaped, two-piece paperboard box used by Melagatti to package cake. The container's tapered lid and tray components, octagonal in cross section, are locked together after filling to form a single unit with paperboard carry handle.

Two plastic-film industrial shipping bags were singled out for resistance to breakage, moistureproofness, ease of handling and stacking, and eye appeal. They are Monte-



Squeeze container for floor wax.

catini's plasticized polyvinyl chloride bags for packaging dry chemical products and Edison's PVC valve bag for chemical fertilizer.

Additional information about "Oscar" winners can be obtained from Istituto Italiano Imballaggio, Via Altinate 31, Padua, Italy. ●

The first polypropylene wrap

[Continued from page 109]

pilot operation to work out machine problems, will be expanded by Ward to the full bread line and to sweet goods probably before the year's end. Production of polypropylene-wrapped bread has been limited so far to about 10,000 loaves per day in the three marketing areas.

Ward engineers have observed marked differences between the handling of this new film and polyethylene on the standard wrapping machines that have been modified with several types of conversion kits for thermoplastic films. For instance:

1. Polypropylene film is reportedly harder than polyethylene and dulls conventional cut-off knives more rapidly. To counteract this, Ward has used both case-hardened and tungsten-steel knives and has increased the cut-off impact and changed the angle of the blade. These measures appear to have solved the problem.

2. Polypropylene has a higher sealing temperature than polyethylene and the film heaters have been raised by 30 to 50 deg. F., to pro-

duce a film temperature of about 280 to 300 deg. F., to overcome this temperature resistance and so obtain a firm seal.

New billboard end labels, which were recently introduced for polyethylene and have a low-melting-point coating, are said to be satisfactory for end sealing the polypropylene-wrapped loaves. The body band also has a low-temperature coating and Ward has been experimenting with pre-tacking this strip to the film before wrapping to increase the strength and integrity of the final bottom seal on the loaf.

Although Ward's polypropylene bread wraps, like most bread wraps, are not printed, tests have shown that there are no problems in printing polypropylene by any conventional process, the company reports.

The successful introduction of polypropylene film should broaden the scope of thermoplastic films in the baking industry by making available, at lower cost, functional advantages heretofore possible only with more expensive materials. ●

The eyes have it

[Continued from page 125]

attached to the outer diameter of one of the lenses. This rating is given to the element in question. Since the reading is a direct mechanical one and no electrical devices are employed to arrive at this rating, the inventor says an exact degree of visual barrier is always interposed between subject and design, thus assuring accuracy.

Readings are taken in this way for all the elements of a design. Readings for each element can be compared and a total reading for the complete unit can be computed. These readings may then be used by management to determine the relative merits of design variations.

Unlike some testing devices, no attempt is made to compensate for varying levels of visual acuity in different individuals. The inventor claims that since all the designs tested are rated comparatively by each subject, variance in eyesight is of no consequence. In hundreds of tests made with this instrument, it has been reported that although the numerical ratings of individuals may vary on elements tested, they are within very narrow limits in the same relative numerical order. ●

Diagonal slotting

[Continued from page 143]

figures. The value of the conservation of available supplies of fibre-board would, in time of war, be an additional advantage.

Exposed storage conditions and multi-handling operations are mandatory in determining the adequacy of a container for military shipping and handling. Accordingly, test shipments for this new style of container included arctic, tropic and desert climatic-exposure conditions.

Summary

Two types of containers were compared as to manufacturing requirements and cost. Diagonally slotted containers can be made with reasonable economy on standard box-making equipment which would normally be available to any sizable shipping-container manufacturer. From a comparative economic standpoint, an average price differential of \$51.78 per 1,000 containers was

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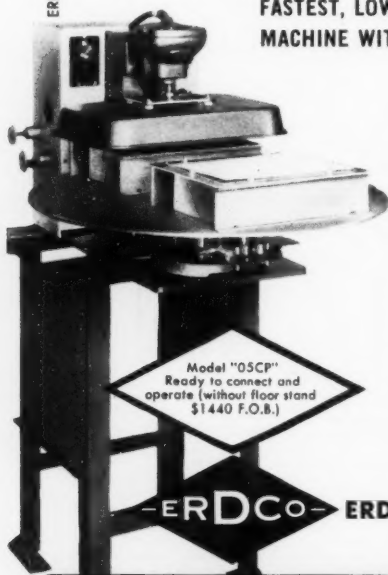


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established as between regular slotted (without sleeve) and diagonally slotted containers, with the price difference being in favor of the regular slotted type. However, the price differential per 1,000 containers between regular slotted containers *with sleeves* (used for overseas shipment of these units) and diagonally slotted containers without sleeves averaged \$117.68 in favor of the latter. This points to a substantial saving in cost and in material which might be improved further as more experience is gained in producing diagonally slotted containers.

Further study is required on reducing the rather lengthy stitching operation and modifying the extensive perforating procedure. ●

Progress in pouching

[Continued from page 119]

chine instead of from the top. Minor changes also were made in the tube-conveying, rotary-fin-sealing and cut-off mechanisms to accommodate the shape and length of the film package. Polyethylene-coated cellophane was selected because the product requires high barrier protection and has a long shelf life. Also, the sharp ends of macaroni and spaghetti would be likely to puncture a more fragile film.

Development of this machine culminates a four-year program by Skinner to increase productivity and standardize the appearance of its packages. Originally, roll-stock cellophane was automatically sheeted and strip glued, then hand wrapped around the pre-weighed spaghetti or macaroni and fastened on the ends with pressure-sensitive tape.

First change in this procedure was the adoption of a rotary carrier employing pre-formed bags and eliminating manual motions except for weighing, loading and the application of one heat seal to close the bag. Despite increased output, 15 operators were needed to achieve a production of 8,500 packages per day. While further reducing manual handling, the new automatic machine regains the cost advantage of roll-stock film and reduces the number of operators to eight. Future development of automatic weighing equipment is expected to free the five scale operators still in use and completely automate this tricky packaging operation. ●



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TABLETS




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Foil Packaging

Put Alcoa's aluminum packaging services to work for you. We create new designs, check costs, answer questions on anything from appearance to performance. We offer you full-scale research facilities . . . merchandising and marketing data . . . the most sales-minded approach in the industry. All mobilized to help you design it . . . apply it . . . sell it.


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 Alcoa, with the most creative, sales-minded design approach in the industry, invites you to write in for more information on one of its favorite subjects: Alcoa Aluminum Packaging. Write to Aluminum Company of America, 1655-K Alcoa Building, Pittsburgh 19, Pa.



Better Packaging

ALCOA ALUMINUM

Foil Packaging



DOESN'T ANYONE READ PLAIN ENGLISH?

● Careful motorists regard every other driver as a potential killer. They have nothing on us.

INLAND assumes your boxes will be handled by men who can't—or don't—read plain English like "handle with care".

So, while we print handling cautions on your boxes, we actually depend on quality raw materials, expert

design, thorough testing and careful manufacturing to make sure INLAND boxes can "take it." That means your product is safe in an INLAND box, even if it rides to market like this:

THIS END UP

Why do we work so hard to make sure? Because we like to read letters that begin, "We would like to reorder..."

MILLS:
Macon, Georgia
Rome, Georgia

BOX PLANTS:
Indianapolis, Indiana
Middletown, Ohio
Winchester, Virginia
Milwaukee, Wisconsin
Evansville, Indiana
Detroit, Michigan
Macon, Georgia

Erie, Pennsylvania
Ashtabula, Ohio
Orlando, Florida
Rome, Georgia
Biglerville, Pennsylvania
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Dallas, Texas
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INLAND CONTAINER CORPORATION
Corrugated Fiber Containers

General Offices: Indianapolis, Indiana

Partners in Progress with American Industry

Another in a series of Hoerner
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Container Experts



THIS IS THE HOERNER SPECIALIST FOR PACKAGING TASTY THINGS

If your tasty things need a tougher, more tasteful container, call Hoerner. Packaging engineers will create a carton to save you money in space, time and labor. And Hoerner artists will add a dash of design. Let Hoerner experts cook up a tough, spicy carton for your beautiful and tasty things.



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Corrugated Specialists for Mid-America

GENERAL OFFICES: 600 Morgan Street, Keokuk, Iowa • PLANTS: Fort Smith and Little Rock, Ark.; Des Moines, Keokuk and Ottumwa, Iowa; Danville, Illinois; Minneapolis, Minn.; Tupelo, Miss.; Springfield, Missouri; Sand Springs, Okla.; Sioux Falls, South Dakota; Fort Worth and Mission, Texas • ASSOCIATE: Cajas y Empaques Impermeables, S.A., Mexico City D.F., Mexico

PI Forum: The '60s

[Continued from page 129]

G. T. Schjeldahl Co.
Down-to-Earth Marketing of
Blue-Sky Packaging Ideas—
RALPH F. HANSEN, assistant
to director of marketing, Mon-
santo Chemical Co.
Packaging Research — and
the Packaging Institute—DR.
L. E. SIMBL, director, Re-
search & Development Dept.,
Film Div., Olin Mathieson
Chemical Corp.

Tuesday, Nov. 1

9:00 Registration

9:30 Drug and Pharmaceutical Seminar. Theme: Unit Pack-
aging . . . A Look into the
'60s—HUGH HORNER, director,
packaging design and devel-
opment, Chas. Pfizer & Co.,
Inc., seminar chairman, and
CHARLES SPANNELLO, man-
ager, pharmaceutical produc-
tion, Schering Corp., session
moderator

Flexible Unit Packaging—
What we can Expect in the
'60s—L. I. VOLCKENING, presi-
dent, Ivers-Lee Co.

Thermoforming Blasts Off
in the '60s—LOUIS H. PROHL,
president, Plaxall, Inc.

The Many Uses of Stretch-
Pak in the '60s—A. R. COZ-
ZOLINO, manager, Stretch-Pak
Div., The Nerins Co.

9:30 Production Line and Ma- chinery Seminar. Theme:

Down-to-Earth Facts . . .
Packaging for the '60s—R.
ROSS KITCHEN, plant manager,
Glenbrook Laboratories Div.,
Sterling Drug, Inc., seminar
chairman

Electrical Power Activating
and Converting Elements in
the Packaging Industry—
Electric and Electronic—
R. C. BERGER, equipment in-
dustries engineering section,
Apparatus Sales Div., General
Electric Co.

Sources of Energy, Control
and Motion on the Packag-
ing Line—Pneumatic—HALE
S. CADIEUX, eastern sales man-
ager, Bellows Valve Air Div.,
International Basic Economy
Corp.

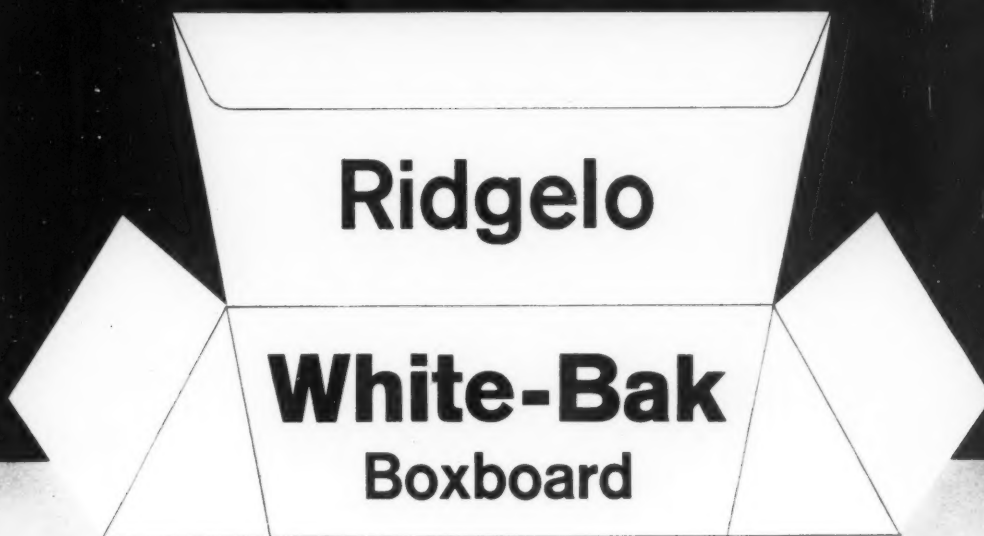
The Packaging Machinery
Manufacturer Discusses the
Pros and Cons of Mechanical
vs. Electronic Controls—
GENE LAKSO, vice president-
sales, The Lakso Co.

Aerosols in the '60s—MORRIS

[Continued on page 218]

WHITE
On Both Sides

SMOOTH
Prints Beautifully



ECONOMICAL
Attractively Priced

AVAILABLE
For Prompt Deliveries

For Cartons That are Clean, White, and Beautiful
...Any Way You Look at Them!

Superior to bleached sulphate boxboards in many important qualities, Ridgelo White-Bak also costs less than most grades! Available in a wide choice of glossy finishes, White-Bak makes cartons that have "just right" rigidity and snap... that fill easily... that help build customer satisfaction for repeat sales. It is available in .012 to .030 thicknesses—for quick delivery on even small orders. Write for samples and an interesting test report on this two-side white boxboard.

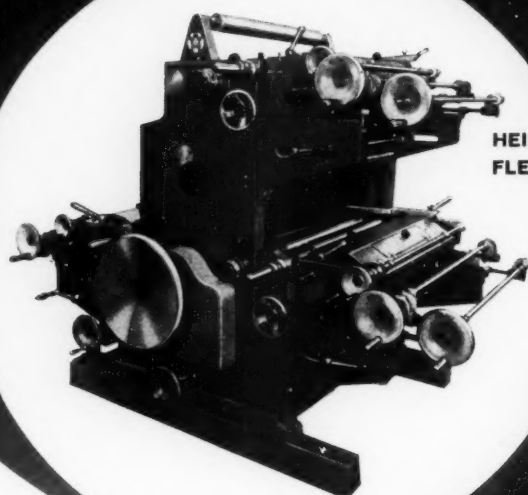


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Alert converters are cashing in on the increased demand for multi-color printed bags as an effective advertising medium, featuring store name, brand names, on-sale items and other specialties.

**THE HEINRICH ALINA-X-30 FLEXOGRAPHIC ENDPRINTER
IS THE PERFECT PRESS FOR BAG PRINTING**

Installations of 10 to 25 of these outstanding Endprinters are in use in several plants and repeat orders are the rule. Converters everywhere are installing HEINRICH Endprinters. When may we serve you?

Send for brochure listing specifications and full information.

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Manufacturers' Literature

Described below . . . the latest literature, catalogs and brochures from the packaging industry. Dollar saving and dollar making ideas and data . . . available without charge.

EQUIPMENT • SUPPLIES • SERVICES

LOCK SEAL CLOSURES. 3-page illustrated brochure describes features and uses of a double lock leakproof plastic closure designed for the winemakers' industry, bottlers of wines and champagnes. Lok-Seal, Inc. (J-050)

ENVELOPE-BAG FEEDING, FILLING AND SEALING MACHINE. 2-page illustrated brochure describes features and applications of machine designed to feed, fill, and seal envelopes or bags from 2 1/2 inches by 3 1/2 inches up to 4 1/2 inches by 6 inches for such items as tea, custard powders, etc. Walter H. Kansteiner Machinery Co. (J-051)

SLITTER AND REWINDER. 8-page illustrated catalog outlines features and applications of a line of slitting and rewinding equipment and attachments. Technical data. Charles Beck Machine Corp. (J-052)

LABORATORY TESTING SERVICE. 6-page illustrated folder outlines features and sphere of operations of an independent laboratory offering services to industry for testing, research, product design-development, inspection and instruments. U. S. Testing Co., Inc. (J-053)

PACKAGING MACHINERY. 16-page illustrated catalog describes features and applications of a line of packaging machinery such as carton feeders and bottom sealers, small and large double package makers, net and gross weighers, etc. Pneumatic Scale Corp., Ltd. (J-054)

PACKAGING MACHINERY. 5 illustrated data sheets describe line of high speed, unit packaging machinery for handling range of products from hardware items, pharmaceutical tablets, liquids, etc. Wrap-Ade Machine Co., Inc. (J-055)

BENCH-TIE MACHINE. 4-page illustrated brochure describes features and applications of machine designed to second tie artificial casings. Vac-Tie Fasteners, Inc. (J-056)

COORDINATED WEB-PROCESSING EQUIPMENT. 6-page illustrated catalog describes features and applications of equipment designed for processing continuous web materials like paper, board, film, fabrics, foil, etc. Waldron-Hartig Div., Midland-Ross Corp. (J-057)

BAG PACKAGING. 16-page illustrated brochure outlines features and advantages of various forms of bag packaging, made of such materials as paper carton, open-mesh, burlap, and laminated materials. Chase Bag Co. (J-058)

FLAT STEEL STRAPBINDER. 1-page illustrated brochure outlines features and applications of a strapbinder pneumatic stretcher for applying flat steel strapping from vibrated wound coils. A. J. Gerrard & Co. (J-059)

FLEXOGRAPHIC PRINTING PRESS. 1-page illustrated brochure describes features and applications of a 4-color 30 inch flexographic press for printing polyethylene and cellophane. Specifications. Geveke & Co., Inc. (J-060)

PACKAGING MACHINE. 6-page illustrated brochure describes features and applications of machinery designed for packaging a variety of hard or soft goods, one or many uses, to package, in foil, film or paper. Sundstrand-American Broach, Div. Sundstrand Corp. (J-061)

PRODUCTION-LINE IMPRINTING, CODING MACHINERY. 4-page catalog brochure describes features of machinery designed for production-line imprinting of supplementary identification data and code dates on packages of every size. Adolph Gottscho, Inc. (J-062)

CARTON FILLING, SEALING MACHINERY. 6-page illustrated brochure describes features and applications of a line of machinery designed to form, fill, glue and seal standard cartons—top and bottom—and individual serving and sample packages. Specifications. J. L. Ferguson Co. (J-063)

STOCK CARTONS FOR MAILING, PACKAGING. 4-page illustrated folder features 60 stock size cartons made from virgin kraft boxboard, designed for mailing or packaging. Specifications, prices. Calumet Carton Co. (J-064)

UNIT PACKAGING MACHINE. 2-page illustrated brochure describes features and applications of a roto-wrap unit packaging machine which makes, fills, seals containers from various types of flexible materials. Specifications. Roto-Wrap Div., Conapac Machine Co. (J-065)

PRESSURE BURETTE, HAND CRIMPER. 2 illustrated data sheets describe features and applications of a pressure burette designed for injecting propellants into aerosol cans. A crimper designed to crimp faster and more efficiently. Aerosol Machinery Co. (J-066)

HYPODERMIC CARTRIDGE, NEEDLE MACHINERY. 4-page illustrated brochure describes line of machinery designed for processing and production of disposable single dosage cartridges and hypodermics. Ampoule Machine Co. (J-067)

MEAT CASING FASTENERS. 4-page brochure describes features and applications of a line of aluminum fasteners designed for making uniform sausage end closers, for processors and packers. Hercules Fasteners, Inc. (J-068)

3-WALL WRAP-AROUND CONTAINERS. 4-page illustrated brochure describes features and applications of triple wall wrap-around containers made from corrugated sheets. Tri-Wall Containers, Inc. (J-069)

UNCASING MACHINERY AND EQUIPMENT. 6-page illustrated folder describes features of a line of equipment designed for the uncasing of bottles in the 6 to 32 oz. range . . . from 3-wide and 4-wide half-depth cases. Handles all cardboard, and most metal carry-home cartons. Atkron, Inc. (J-070)

A.C. CONTROLLED SPEED SYSTEMS. 4-page illustrated brochure, with schematics, describes features and applications of a principle of controlled speed systems, using A.C. characteristics to provide adjustable speeds by converting fixed speed A.C. motors to adjustable speeds on either existing or original equipment. U.S. Electrical Motors, Inc. (J-071)

DRIVE CONTROL AND REGULATORS. 16-page folder describes features of equipment designed to operate controls, changes, and regulate motor speeds, horsepower and torque. Reliance Electric & Eng'g. Co. (J-072)

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- ① SELECT the items you want
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EQUIPMENT • SUPPLIES • SERVICES

CALKING CARTON SEALING PROCESS. 4-page illustrated folder describes a machine designed to seal carton and flaps in one integrated operation by calking method, handling up to 300 cartons per minute. Packaging Corp. of America. (J-073)

SHEET STOCK TESTING INSTRUMENTS. 12-page brochure illustrates and describes thickness micrometers, burst strength testers, and basis weight scales for testing various physical and mechanical properties of papers, tissues, films, foils, boards, etc. Prices E. J. Cady & Co. (J-074)

WOOD PARTICLE BINDER, FLOUR UTILIZATION RESINS. 40-page technical bulletin discusses methods of producing, handling, converting wood particles into particle board using specifically designed resins. Tables, specifications, charts. American Cyanamid Co., Plastics & Resins Div. (J-075)

SELF-SERVICE MEAT WRAP FOR FREEZER STORAGE. 8-page folder describes features of transparent, flexible packaging film designed as wrap for fresh red meat for bloom retention and freezer storage. Goodyear Packaging Films Dept., Goodyear Tire & Rubber Co. (J-076)

CASE GLUERS AND SEALERS. 4-page folder describes a system for case gluers and sealers. Mechanism is case-controlled by an electrically energized pneumatic valve to assure a fast and positive skip-gap action. Self-adjusting. Emhart Mfg. Co., Portland Div. (J-077)

PRINT-WEIGHING DATA RECORDING MACHINE. 4-page illustrated catalog folder describes features of print-weighting data recording machine which provides weights data for accounting records. Toledo Scale Corp. (J-078)

PRINT-SEAL-COUNT, PACKAGING MACHINES. 8-page illustrated catalog folder describes features and applications of packaging machines which heat seal, print, cut off and count bags up to 8 in. x 8 in. automatically. Product Packaging Engineering. (J-079)

BOTTLE UNCASING EQUIPMENT. 6-page illustrated brochure describes features and applications of automatic equipment designed to uncage up to 1,000 bottles per minute. Also case cleaning equipment. Climax Products Div., Lodge & Shipley Co. (J-080)

IMPACT-ACCELERATION MEASURING EQUIPMENT. 4-page illustrated catalog folder describes equipment designed for use in measuring impact and acceleration rate in product shipment or transport of people. Impact-O-Graph Corp. (J-081)

GLUE GUN EQUIPMENT. 6-page illustrated catalog brochure describes features and applications of a line of adhesive glue gun equipment used for spotting, surface coating or stripping. John P. Fox Co., Inc. (J-082)

HEAT SEAL PAPERS. Small 6-page brochure supplies catalog information and advantages and applications of two general types of heat seal papers designed for packaging. Brown-Bridge Mills, Inc. (J-083)

HEAT SEALING MACHINERY. 12-page illustrated catalog describes features and applications of a line of thermal impulse heat sealing machinery designed for use with thermoplastic materials. Tables, specifications, prices. Vertrod Corp. (J-084)

ROLL LEAF MARKING. 3 illustrated pages describe features and applications of equipment and process of engraving designs or lettering in color onto various surfaces such as paper, cloth, textiles, leather, plastics, etc. Specifications and data. Peerless Roll Leaf Co. Inc. (J-085)

LIQUID FILLING MACHINES. 8-page illustrated catalog describes features and applications of a line of machines that fills various types and shapes of containers . . . glass, metal, plastic . . . from fractional ounces to carboys, as well as custom made machines to fill unusual requirements. MRM Co., Inc. (J-086)

MACHINES FOR COATING, 4-COLOR OFFSET PRINTING. 4-page illustrated catalog describes features and applications of a line of machinery designed for automatic coating as well as 4-color offset printing on containers such as cans, collapsible tubes, plastic bottles, cylindrical aluminum containers and vials. Specifications. Index Industrial Corp. (J-087)

STOCK SIZE MAILING BOXES. 6-page illustrated catalog folder describes features and applications of a line of stock size mailing boxes designed for mailing of items by parcel post which require no sealing nor wrapping. Sizes 3-1/2 x 2-1/2 x 1-1/2 to 7-1/2 x 5-1/2 x 2-1/2 inches. Specifications and prices. Globe Paper Box Co. (J-088)

HEAT SEALING AND PACKAGING EQUIPMENT. 24-page illustrated catalog describes features and applications of a line of equipment designed for heat sealing of packages of all surfaces, flat, hollow or irregular shapes or forms. Specifications. Clamco Div., Cleveland-Detroit Corp. (J-089)

MARKING, EMBOSING, PRINTING AND DECORATING MACHINES. 4-page illustrated catalog brochure describes features and applications of a line of machinery designed for marking, embossing, printing and decorating both plastic and other surfaces. Specifications. Ackerman-Could Co. (J-090)

CUTTING AND CREASING EQUIPMENT. 6-page illustrated brochure describes features and applications of equipment designed to perform cutting and creasing operations in the layout of accurate carton construction. Ori Stone Assoc. (J-091)

PACKAGING MACHINERY. 16-page brochure illustrates and describes a line of packaging machinery including counting and filling machine, automatic weighing and filling machine with agitating top hopper, among others. Aidlin Automation, Inc. (J-092)

PACKAGE SALES APPEAL TESTING. 6-page illustrated broadside discusses features and uses of a method designed to test the visual impact for sales appeal of a package. Crowell Carton Co., Div. of St. Regis Paper Co. (J-093)

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"GET POSITIVE, PERFECT LABELING OF HOT OR COLD CONTAINERS WITH M-P ADHESIVES"



"Our labeling adhesives are being used on both *hot* and *cold* cans and bottles—as well as every kind and shape of round container you can imagine—glass, metal (plain or coated), plastic, etc.

"You get strong bonds and smooth labels with M-P adhesives because we take that extra care to build in properties such as ease of machining, quick tack for high speed machines, short break without stringing—water, heat and humidity resistance as required. As an M-P Technical Service Man, I want to also note that we have worked with spot, wrap-around and lap-over labels plus every kind of labeling machine.

"Write or give me a call about your labeling operation. In New York City, 630 West 51st Street, phone JUDson 2-3790. In Chicago, 1770 Canalport Avenue, phone CAnal 6-2219."

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Kellogg recognizes the consumer acceptance of SEAL-SPOUT, the aluminum pouring spout that's practical for packages containing free-flowing products.



SEAL-SPOUT Corp.

MOUNTAINSIDE, NEW JERSEY

[Continued from page 212]

J. ROOT, technical director, G. Barr & Co.
Shrink and Vacuum Packaging with Flexible Films—WILLIAM J. ROTHFUSS, general manager, Equipment Div., Cryovac Div., W. R. Grace.

9:30 Printing Seminar. Theme: Provocative Package Printing—Flexography—ALEXANDER R. BRADIE, vice president, Mosstype Corp., seminar chairman, and JULIAN ROSS, executive director, Flexographic Technical Assn., session moderator

Flexographic Printing—A discussion by The Flexographic Technical Assn. in cooperation with PI's Printed Packaging Div.

Designing for Flexographic Printing—KARL FINK, Karl Fink & Associates

Printers' Viewpoints on Designing for Flexographic Printing—SAM RIVMAN, president, Wrapture, Inc.

Outstanding Flexographically Printed Jobs—DOUGLAS E. TUTTLE, national flexographic sales manager, Printing Ink Div., Interchemical Corp.

Flexographic Equipment Round-Up—ROBERT ZUCKERMAN, manager, New York sales, Kidder Press Co.

Color Quality for Flexographic Pictorial Reproduction—EDWIN W. WIEGAND, The Yoder Engraving Co.

12:15 Mid-Forum Luncheon. DUDLEY J. TAW, vice president, McKesson & Robbins Co.

2:00 Drug and Pharmaceutical Seminar (continued)

Theme: Exploding Use of Drug and Pharmaceutical Plastic Bottles in the '60s—CARL B. BURNSIDE, manager, Package Development Dept., Eli Lilly & Co., seminar chairman, and JAMES L. EAGAN, packaging research, Rexall Drug Co., session moderator
Developments in Blow Molding of Containers—W. O. BRACKEN, plastic sales development, Hercules Powder Co.
Projection of Plastic Raw Material Uses in the '60s—CARL F. MASSOPUST, Chemical Div., Rexall Drug Co.

Plastic Container Use Possibilities in the '60s—ANTHONY IANNAONE, technical director, Fluid Chemical Co.

Outlook for Use of Plastic Bottles for Pharmaceutical and/or Related Fields Dur-

ing the '60s—LEONARD G. PHILLIPS, manager, Pressed Plastics Div., Owens-Illinois

2:00 Production Line and Machinery Seminar (continued)—Theme: Packaging for the '60s . . . Fancy—From Cloud Nine—IRA GOTTSCHO, president, Adolph Gottscho, Inc., seminar chairman

The Packaging Machine of the '70s—ROGER L. PUTNAM, Sr., board chairman, Package Machinery Co.

The Electronically Automated Packaging Line—W. E. WOOD, automation engineer, Processes Research, Inc. Needed: More Imagination in Mechanical Research—ROBERT J. KELSEY, engineering editor, MODERN PACKAGING Magazine

The Third Dimension in an Integrated Packaging Line—LELAND R. SRIGLEY, director, industrial engineering, Parke-Davis & Co.

2:00 Printing Seminar (continued). Theme: Provocative Package Printing—Letterpress—ERNEST A. GREEN, divisional vice president, Printing Ink Div., Interchemical Corp., seminar chairman, and WILLIAM D. HALL, technical director, Folding Paper Box Assn. of America, session moderator

Folding Boxes Printed by the Letterpress Method—A discussion by the Folding Paper Box Assn. in cooperation with the Packaging Institute's Printing Div.

Original Engravings and Platemaking Techniques in the Letterpress Field—DR. MARVIN ROGERS, consultant Design for Letterpress—ALBERT KNER, director, Design Laboratory, Container Corp. Letterpress Printing on Folding Boxes—MEL KERNAN, plant manager, Ohio Boxboard Div., Packaging Corp. of America

6:30 President's Reception

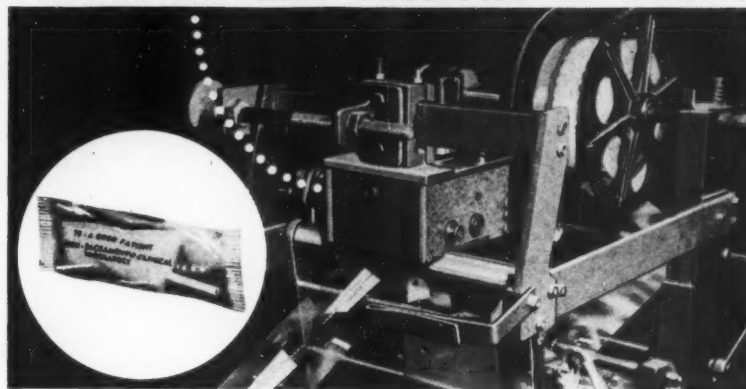
7:30 Packaging Institute Awards Dinner. Address by JAMES HAYS, professor emeritus, Michigan State University

Wednesday, Nov. 2

9:00 Registration

9:30 Flexible Packaging and Plastics Seminar. Theme: Thinking Flexibly for the '60s—EDWARD G. PENN, sales development manager, Riegel

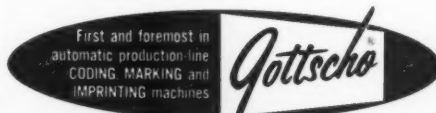
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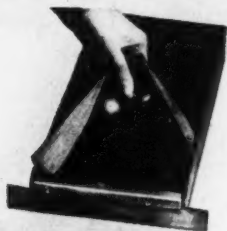
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Avoid power-robbing,
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Aluminum Foil's Contribution to Present and Future Flexible Packaging—DR. M. A. MILLER, chief, Foil & Packaging Div., Aluminum Co. of America

Shrink—A New Tool for the Packaging Engineer—ROBERT D. LOWRY, technical director, Cryovac Div., W. R. Grace & Co.

Product Development in Flexible Packaging—ORVILLE R. JOHNSON, manager, Product Dept., Western-Waxide Div., Crown Zellerbach Corp. Progress Report on Polypropylene Film—1960—DR. E. T. SEVERS, product manager-film, AviSun Corp.

High-Density Polyethylene Containers—Practical Engineering Considerations—BROOKS B. HEISE, manager, product engineering; J. H. PARLIMAN, technical service manager, and JULES PINSKY, chief physicist, Plax Corp.

9:30 Food Seminar. Theme: Food Packaging for the '60s—FRED W. SCHREIBER, chief, packaging development, Lever Bros. Co., seminar chairman Packaging of Aerosol (Pressurized) Foods—W. EARL GRAHAM, eastern sales manager, Clayton Corp. Refrigeration Research and Containers—DR. WALTER A. MACLANN, director, The Refrigeration Research Foundation

Problem Packages in Refrigerated Warehouses—FRANKLIN D. NEWELL, JR., manager, The Minneapolis Cold Storage

Unplanned Obsolescence in Packaging—CARL D. SCHOB, manager, package development and design, Armour The Packers' View of the Food Additives Amendment—ROBERT N. JOHNSON, director of Processed Foods Div., The Kroger Co. Supplier's View of the Food Additives Amendment—ADOLPH MILLER, director, research and development, Milprint, Inc.

9:30 Closure Seminar. Theme: Closures the World Over—H. F. WHEATON, vice president-operations, American Flange & Mfg. Co. Closure Design for Metal and Plastic Tubes and Plastic Bottles—NICHOLAS MARCHAK, vice president, Bradley

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TAPER
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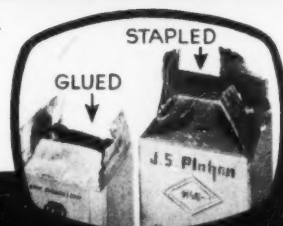
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it's dangerous to persons and con-
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Specifications: Label Range: From "postage stamp" 45 to 85 per minute.

Production: Variable speed drive from size to 6" wide x 7" long.

Label Materials: Foil, paper, plastic and other materials.

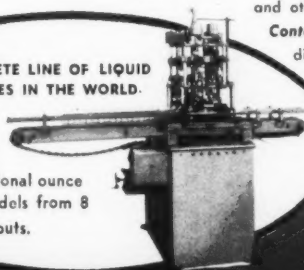
Container Range: 3/4" high x 1" dia. through 14" high x 7" dia.

Dimensions: Overall length, including conveyor 90". Width 28". Height 56".

Changeover Time: Approximately 15 minutes.

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Sun Div., American Can Co. Developments in Closures in Western Europe—Specifically in France—PIERRE BELLIER, vice president, Saint-Gobain, Inc.

Machinery for Applying Closures—EDWARD L. KUHN, president, Consolidated Packaging Machinery Corp.

Metal Closures in Overseas Markets—CHARLES J. JACOBS, market director, Dewey, & Almy Overseas Co., W. R. Grace & Co.

9:30 Petroleum Packaging Committee Open Meeting. Theme: Provocative Petroleum Packaging for the '60s—L. E. STUART, director, product costs and pricing, Continental Oil Co., seminar chairman

Future Package Trends and Designs for Lubricating Greases—F. W. LANGNER, package coordinator, Socony Mobil Oil Co.

Rail and Motor Carrier Shipping Regulations and Practices—Recent Changes and New Developments—C. H. FICKEN, assistant general traffic manager, Mobil Oil Co. Small Metal Packages—I. N. WADE, Gulf Oil Corp.

Resume of Shipping Subcommittee Activities, 1957-1960—HARRY F. KIELHORN, Cities Service Oil Co.

Shipping Cases for Motor Oil Cans—K. W. LENHART, Manufacturing Dept., Sinclair Refining Co.

12:15 Wrap-Up Luncheon.

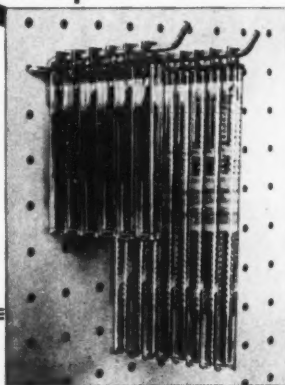
Theme: Packaging Institute's Technical Committees on Review—Reviews and forecasts by the chairmen of the five divisions of the PI Technical Committee Organization — STANTON D. SMITH of The Dow Chemical Co., Materials Div. chairman; RICHARD J. HENNESSY of Lederle Laboratories Div., American Cyanamid Co., Product Div. chairman; IVEN G. NICHOL of Morningstar-Paisley, Inc., Production Div. chairman; ERNEST A. GREEN of Interchemical Corp's Printing Ink Div., Printed Packaging Div. chairman, and IRA GOTTSCHO of Adolph Gottscho, Inc., Machinery Div. chairman

Professional Point of View —DR. FRANK C. CAMPINS, Polymer Industries, Inc., and chairman of the PI Professional Membership Approval Committee

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Price cuts announced for polyethylene resins and film

Following the lead of Union Carbide Plastics and Du Pont, all other major producers of low- and medium-density polyethylene resins (film and coating grades) have revised their price schedules downward. And one converter has as a result announced two recent cuts in the price of medium-density cast polyethylene film.

The price for general-purpose low-density polyethylene resin, including film grade, is now 27½ cents per pound, compared with the former 32½-cents-per-pound price.

The list price for regular low-density polyethylene film before the resin price break was around 50 cents per pound, with an 8% discount to converters that made it about 44 to 46 cents. There has not been time as yet to determine what will happen to the low-density film price as it may be affected by the nickel-a-pound drop in resin price. Nor has the price break had any effect on the price of high-density polyethylene resin, now used in film form only for heavy-duty industrial shipping bags.

The philosophy behind the reduction in resin prices is that it will stimulate increased use of the film in new markets and in present markets which have adopted polyethylene-film packaging to a limited degree. (Some 340 million pounds of polyethylene resin were used for film in 1959; *Modern Plastics* magazine predicts that 375-400 million pounds will be consumed in film applications this year—more than 70% of it in packaging.)

This "growth theory" was advanced by Union Carbide Plastics Co. as a major reason for its 5-cents-per-pound cut (from 32½ to 27½ cents) in the price of Bakelite low-density polyethylene resins and compounds. R. K. Turner, president of the company, said the action was taken as part of "a long-range marketing plan to broaden the use of polyethylene." He added that "as a result of improvement in quality and economics, the growth of polyethylene has been outstanding, but there are still many additional uses which will take advantage of the characteristics of these polyethylene

plastic resins at the new prices."

More recent polyethylene-resin price reductions have been made by Allied Chemical and Eastman Chemical. The former has chopped the price of five low-molecular-weight coating and molding resins. Their prices now range from 27½ to 28½ cents per pound. Eastman's cut, for low-molecular-weight coating resins, lowers the carload-quantity price to 27½ cents per pound.

What effect spreading resin-price reductions may have on other than low-density types of polyethylene film for packaging is suggested in a recent announcement from Ludlow Plastics. This converter reports that, effective August 15, the quantity prices of two medium-density cast polyethylene films have been cut four cents each (from 67 and 62 cents per pound to 63 and 58 cents, respectively). One week before these cuts, the price of the more costly of these films was slashed from 72 to 67 cents per pound—for a total reduction of nine cents per pound.

The lowering cost of polyethylene resins also is beginning to affect the

LOW COST WAY TO MAKE FRIENDS AND INFLUENCE SALES!

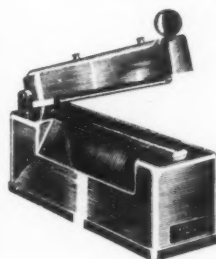
• Reprints of articles and features that appear in *Modern Packaging* are often surprisingly inexpensive when ordered in quantity. Many companies make it a practice to have stories which have a bearing on their business reprinted for distribution to their own personnel, customers, prospects, stockholders, or to other interested groups.

Whenever you see editorial matter of this type in *Modern Packaging* magazine or the Encyclopedia Issue which you can use in reprint form, in quantities of 200 copies or more, write and quotations will be furnished promptly.

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ALL CARTONS MEET
FEDERAL SPECIFICATIONS

1 x 4 x 6 1/4	2 1/2 x 2 1/2 x 4
1 x 8 1/2 x 11	2 1/2 x 2 1/2 x 6
1 1/4 x 2 x 3	2 1/2 x 2 1/2 x 8
1 1/4 x 2 1/2 x 4 3/4	2 1/2 x 3 1/2 x 5 1/2
1 1/4 x 3 1/2 x 3 1/2	2 1/2 x 3 1/2 x 6 3/4
1 1/2 x 1 1/2 x 3	2 1/2 x 4 x 6 1/4
1 1/2 x 1 1/2 x 4	2 1/2 x 8 1/2 x 11
1 1/2 x 2 1/2 x 3 1/2	2 3/4 x 2 1/2 x 2 1/2
1 1/2 x 2 1/2 x 5 3/4	3 x 3 x 4
1 1/2 x 3 1/2 x 5 3/4	3 x 3 x 6
1 1/2 x 5 1/2 x 7 3/4	3 x 3 x 8
1 1/2 x 8 1/2 x 11	3 x 3 x 10
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1 3/4 x 2 3/4 x 3	3 x 5 1/2 x 8 1/2
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2 x 5 x 11	9 x 11 1/2
2 x 8 1/2 x 11	11 x 13 1/2
2 1/4 x 2 3/4 x 5	12 3/4 x 15
2 1/4 x 4 1/2 x 6	9 3/4 x 12 1/4
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2 3/4 x 4 3/4 x 7 3/4	17 x 21

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economics of packaging materials that use polyethylene in combination with other materials. Reynolds Metals Co. reports a 7% to 10% price reduction for certain laminated

packaging materials which combine aluminum foil, paper and polyethylene, and says that the price cuts "follow a recent decrease in the price of polyethylene flakes." ●

Sounding Board—we ask the readers

[Continued from page 74]

siders the report in every detail and either accepts or rejects it—or more likely, accepts a modified form of the suggestion.

For instance, recently the agency suggested that the horizontal bands that appeared on each of our spice cans reduced the individuality of the cans. They submitted replacement designs for the various cans. The committee accepted the idea that new designs were called for and they accepted many of the proposed changes. However, several minor changes were made in the appearance of some of the cans, such as in the printing or symbols used, etc. In the last analysis everyone concerned was in agreement and the task was performed most efficiently and effectively.

James D. Wells, Vice President—Marketing, Wm. Underwood Co., Watertown, Mass.: Since packaging is primarily, we feel, a marketing problem, the final decision-maker is the head of the Marketing Department. Of course, production requirements and other factors must be considered. Before all of these, however, perhaps the decision is made for us by the consumer. It is not very often that we make a change in a package or a package design without referring it to the consumer. We make use of consumer panels and in-store testing to really give us the answer. From this, our final decision on packaging is seldom more than a matter of interpretation.

J. J. Rush, Merchandise Manager, Rauh Co., Inc., Cincinnati: Because of the nature of our product—shirts—the final packaging decisions, except for specific equipment purchases, etc., are made by the merchandising manager. Since the package becomes an integrated part of the shirt and the merchandising manager in this company has the function of designing the line of shirts made, he should also design packages for these shirts.

Of course, the other interested

officers in the company are active in originating packaging ideas and in offering suggestions and information that might be helpful.

Here is a recent example of how important packaging is in merchandising: The last change that we made was from no package for our individual dress shirts to a polyethylene bag for them. The reasons for this change were (1) product protection, (2) a printed message on the bag and (3) to meet competition. However, the merchandising manager felt it was best not to do the same with the sport shirts because, unlike dress shirts, pattern, color and the "hand" or feel of the fabric is very important. Therefore, no bag has been prescribed.

George Harrison, President, United Instant Coffee Corp., Paterson, N. J.: We are private-label producers of instant coffee and packaging is a vital part of our business. Since our product is seen by consumers on grocery shelves, sales appeal is extremely important. Recently a novel re-use packaging idea was submitted to one of our customers by a forward-looking glass manufacturer. We were able to pack this specialty container, since it was developed with our packaging equipment in mind. We are naturally interested in other jars which can be handled by our equipment so as to offer our trade customers a different and appealing package.

Decisions on container acceptability are made by management after research by our sales and packaging department.

S. M. Vockel, Jr., Secretary-Treasurer, The Waverly Oil Works Co., Pittsburgh: The extent of utilization of packages by this company is only in the area of packaging of motor oil in 1-qt., 5-qt. and 2-gal. cans. Our interest, therefore, in packaging is most basic.

As we are an extremely small company, purchase of packages is one of my administrative duties. ●



**CREATIVE
PACKAGING
BEGINS WITH
DOW
PACKAGING
MATERIALS**

Plastics developed by Dow offer a wide selection of thermoplastics materials available for the packaging industry. On the pages that follow we have highlighted a few of these materials with emphasis on but one or two of their many diversified applications. Covered here are the advantages, for example, of Saran Wrap in the meat market . . . Trycite for fresh produce . . . Latex coated boxboard for better reproduction in glorifying con-

sumer benefits, Polyethylene resin for moisture barrier coatings for paper and film, and Styron for table-ready merchandising. For almost all package designs, covering almost every specific product requirement in a package, you'll find a material from Dow that will help you do it better. Remember, creative packaging begins with Dow Packaging Materials. For full information contact THE DOW CHEMICAL COMPANY, Midland, Michigan.

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DOW



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Latex, for coating materials, can make a good package even better, yet keep it within the confines of sensible cost control. Boxboard coatings with Dow Latex 630 reproduce the package design with exciting fidelity and, where full-color illustrations of the product are used, with tempting appearance that sells the product. It runs equally well on offset or letterpress and its

smooth surface will print bright and clean with a screen as fine as 160 line. Dow Latex in boxboard coatings gives your full-color printed package the advantages of clearer, sharper printability, improved gloss, superior pick resistance, controlled ink holdout, better wet rub resistance and smoother folding without cracking.

DOW

STANT
THE
YES

STANT
THE
YES



RESINS

Polyethylene film resins formulated in the polymer research and production facilities of Dow are designed to fill a variety of needs in the packaging industry. These film resins, developed by Dow, have an excellent range, tailored slip characteristics, and are odor free. To meet the diversification of individual pack-

aging requirements better, there are Dow polyethylene resins with emphasis on impact strength in one case, clarity in another, or whatever the specific function of the package may most require. In addition, new applications for polyethylene resins are now being developed through research at Dow.





TRYCITE

Fresh produce takes on a new look, feel, and economical protection in crisp and clear Trycite®. This breathing-type film features the working combination of a *moderate* moisture and vapor transmission rate plus a *high* gas transmission rate, making it especially valuable for use in tomato wraps. Also important in fresh produce applications are the consistent protective properties of Trycite

under extreme conditions of humidity and light exposure. Trycite is chemically resistant, oriented polystyrene film with outstanding clarity, dimensional stability, and low cost. Because it does not dry out or become brittle with age, Trycite is recommended for window box applications and others where shelf life is an important factor in the package's function.





STYRON

The new trend in merchandising food products: Send it to market "table ready"! With a package suitable for the dinner table, the contents get to the table more often, too! On the shelves in the food markets these colorful table-ready packages help attract the potential buyer's eye. Table-ready packaging, developed by Dow, is now possible for more products than ever before because of new

thermo-forming techniques using Styron®. These containers, designed for the dairy industry and manufactured by a leading Dow customer† using a specialized fabrication technique, offer a wide choice of colors. Styron meets many other types of packaging requirements. It can be injection molded and extruded for thermo-forming—crystal clear, translucent, opaque or color-styled.



†Plastic fabricator's name on request.



SARAN WRAP

The freshness and quality of meat is something you can see when it's packaged in Saran Wrap*. Not only does transparent, crystal clear Saran Wrap let this fresh quality show through but it actually performs the highly important function of protection from the air. As a high moisture and gas vapor barrier, grease resistant Saran Wrap locks flavor and moisture in, contamination out. Heated after wrapping, Saran Wrap

molds itself to the shape of the product, giving it a snug, luxurious feeling, contoured protection which eliminates air pockets. Nothing saves and nothing sells like Saran Wrap, and for meat—the chubs, the bacon slabs, the smoked butts, actually all kinds of processed meats—there is nothing like it. You'll appreciate too, the high quality reproduction of brand identification that is possible with this versatile film.

*Trademark



Aluminum-top beer can

Several American breweries have adopted the seamless, all-aluminum can for beer.* And now the Burger Brewing Co. of Cincinnati introduces its beer in a can with a conventional



Opening ease of Burger's aluminum-top beer can is promoted on can top.

tinplate body and bottom but featuring an all-aluminum top which is reported to be 52% easier to puncture than standard tinplate. This easy-opening feature is promoted by copy on the can top and on the product's six-packs.

Despite aluminum's light weight and relative "softness," the brewer reports no difficulty in crimping the new easy-open top (coated on the underside) to can bodies. Beer in the new can retails at the same price as the former all-tinplate can, indicating that the material-cost factor has remained constant during the change.

Burger reports that the new can is winning favor among consumers.

SUPPLIES AND SERVICES: Aluminum top fabricated and printed by Heekin Can 429 New St., Cincinnati 2, using Kaiser aluminum. Cans by Heekin Can and Continental Can, 100 E. 42 St., New York 17.

*See "First Aluminum-Canned Beer," *MODERN PACKAGING*, Sept., 1958, p. 106, and "New Advances in Aluminum-Canned Beer," Feb., 1959, p. 90. ●

Bag prices raised

Continental Can Co.'s Flexible Packaging Div. has announced price increases of 3 to 6% on certain items in its paper-bag line. Among the paper packages affected by the new price schedule (effective as of Oct. 1) are coffee bags, dog-food bags and specialty self-opening bags used for chemicals, insecticides and other products. ●

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Bell & Howell camera packages now use molded Pelaspan® packaging components as a combined shipping, cushioning and display platform. Camera fits snugly in molded foam parts that allow it to take extreme handling abuse yet eliminate set-up box. It's been proven that molded plastic foam can cut packing and assembly costs by simplifying packing operations; can reduce overall packing weight and shipping charges, eliminate shipping damage, and improve merchandising and display. Let us show you how you can gain these important advantages in your packaging operation without increasing total packaging costs. Write, wire or phone today.

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NEW YORK

Lunch and Dinner Reservations: Michel Templeton 8-6490

Brick packaging

[Continued from page 117]

and steel strapped as a single unit for easier, more economical fork-truck handling at the packager and user levels. The three packs are unitized by the simple device of first applying paperboard strips to the four upper and lower edges of the three consolidated brick stacks. On the strapping machine, paper-feeding reels with self-centering guides automatically feed the four bands of paperboard for positioning on the brick "multipack."

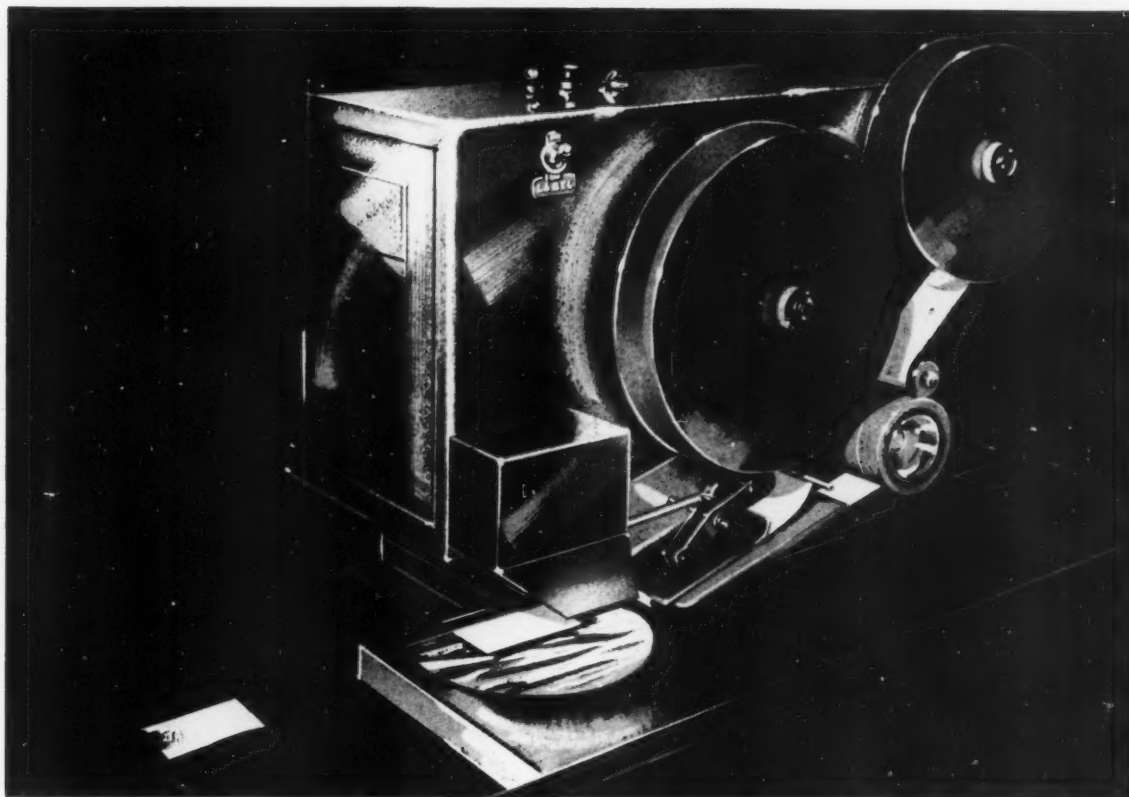
After the paperboard bands have been positioned, the steel-strapping mechanism applies and uniformly tensions the strapping vertically around each of the three 100-brick packs. The three-stack package thus formed can be easily cut apart as needed into individually strapped units of 100. In addition to their unitizing function, the paperboard corner strips protect bricks against chip damage during handling.

Two major advantages reported by Robinson for the conveyORIZED brick-bundling systems are that it enables accurate planning of a daily work schedule and that it solves the problem of uniformly blending brick shades and colors in the individual bundle. According to the company, neither of these achievements was possible in its former operation, when each worker had to hand set a full load of bricks into a stationary stacking jig.

Uniform color blending (which saves time and trouble at the construction site) is a simple matter in the new semi-automatic bundling operation, says Robinson. As the partially loaded jigs cycle past each work station, the stacker can place his load of bricks into the one that affords the proper color match.

The packager also points out that the steel-strapped bundles of brick produced on the new equipment provide greater convenience and cost savings to dealer and contractor customers. Reported user benefits of strapped, color-blended brick are that it results in faster loading and unloading, simplifies inventory methods and reduces on-the-job breakage—as well as eliminating the time-consuming chore of sorting through a pile of loose bricks at the construction site in search of the one with the desired color shade. ●

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JET-FAST...JET-SMOOTH...JET-PERFECT!

Actually picks up and applies labels by "AIR-JET" Action!

- 1** In-coming air jet picks up label as it peels off backing
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Here's the machine that brings new speed, ease, and economy to pressure-sensitive labeling on the production line. Unlike "conveyor-type" applicators which pull the label from the backing by adhesive tension, the Kleen-Stik "Label-Aire" operates on an entirely new "jet action" principle. Manufactured to highest quality standards... thoroughly tested for reliability... *guaranteed* by Kleen-Stik.

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MODERN PACKAGING AND FOOD PROCESSING MACHINERY—Package Machinery Model FA, FF, FFH, FA2, FA3, and FA4 Wrappers with and without Electric Eyes, also Model F and CM3 with Tear Tape, Hudson Sharp Campbell Models 2W6, 2W8 and 2W10 Wrappers, Hayssen Wrappers, all sizes, for cellophane and polyethylene, Lynch Automatic Wrappers, with and without Cardboard Feeds, Package Machinery Palmer Carton Gluers and Traylocks TLA and TLB, Wrap King Models M2, D, DW-2 and DW-4 Wrappers, Pneumatic Scale Automatic Carton Feeder, Bottom Sealers, Wax Liners and Top Sealing Units with interconnecting conveyors, Hayssen 4-Tube Volumetric Compak, Stokes and Smith Model A Volumetric Transwraps also Model A Auger and Model B with 4-Scale Net Weigher, Ceco Models 40 and A 3901-12 Cartoning Machines, Standard Knapp, Ferguson, A-B-C Case Sealers, Fillers, Labelers, Cappers, Mixers, Grinders, Union Standard Equipment Company, 318-322 Lafayette Street, New York 12, N.Y. Phone: CAnal 6-5334.

FOR SALE—Simplex H. Sp. Auto. Bag Machine, Model #1-110 V, 1100 W, Serial No. 1229—Excellent condition, recently overhauled—\$500.00 firm. Write Griffith Labs., Inc. 855 Rahway Avenue, Union, N.J.

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Materials Wanted

ACETATE SHEET SCRAP WANTED—Top prices paid for clear transparent acetate sheeting scrap (no tri-acetate). Write: Davis Products, Dept. No. 5, Kearny, N.J., Phone: N.J.—WY 1-0980 N.Y.—BA 7-6421.

NEED: BUTYRATE AND ACETATE SCRAP Sheet Trim, Purgings, Reground, Claude P. Banburger, Inc., Ridgefield Park, N.J., Hubbard 9-5330

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MANUFACTURERS AGENTS AND SALESMEN. Well established Eastern firm seeks experienced men with proven records in flexible packaging field. We extrude, print, and manufacture Polyethylene Bags, pouches and liners. Print Cellophane Rolls and Sheets and manufacture plain and printed cellophane bags. Excellent opportunity. Several territories open. Replies held in strict confidence. Reply Box 1298, Modern Packaging.

SALESMEN To sell polyethylene extrusion coated films, foils and papers in Southern California. Attractive position with growth company. Inquiries held in confidence. Send complete resume to Guardian Paper Company, 6590 Central Avenue, Newark, California.

RIGID PLASTIC BOX MANUFACTURER will appoint representatives in ALL major marketing areas in United States and Canada. If you know the volume packaging users in your territory, if you require a quality product and if you want unlimited earnings, answer this advertisement—AT ONCE. Inform us in your first letter, territory covered—Firms you currently represent and any information you deem pertinent to warrant consideration and a personal interview. Reply Box 1299, Modern Packaging.

PACKAGING TEST ENGINEER—New position for engineer experienced in devising new packaging tests and test devices. Responsible for shelf life, shippability etc. Packaging Engineer—Mechanical—Need mechanical packaging designer with experience in product design. Must be able to develop and design small parts for high volume production. Knowledge of plastics and metals essential. Write in confidence to Walter Evans, Gillette Safety Razor Co. Boston 6, Mass.

SALES MANAGER To head newly created Division of Extrusion Coated and Laminated Products. Outstanding opportunity with America's Oldest Bag Manufacturer. Individual must be experienced in this line and will have wide latitude in establishing and managing national organization. Excellent salary and other benefits. Plastics Division, Chase Bag Company, 355 Lexington Avenue, New York 17, N.Y.

REPRESENTATIVES WANTED—We have open territories throughout the U. S. for representatives to sell our high quality, low price plastic containers to dairy, packaging, and supermarket trade. We are one of the largest manufacturers of this type merchandise in the country and we are expanding our operations. We can keep you competitive price-wise. We also have an opening for a good Sales Manager experienced in these fields. A. C. Martinelli Plastic Container Corporation, West Warren, Mass.

INTEGRATED PAPER MANUFACTURER needs experienced corrugated container packaging designer for Dallas plant; also Plant Engineer for Owosso, Mich. Salary commensurate with ability and experience. Excellent fringe benefits. Reply Olin Mathieson Chemical Corp., P. O. Box 488, West Monroe, Louisiana.

REGIONAL REPRESENTATIVE WANTED—High rated mid-western producer of plastic film for converters and users in the packaging and plastics industries, seeks an experienced, aggressive representative for the great lakes area. Compensation will be based on background and ability. Company pays expenses. Address Box 1300, c/o Modern Packaging.

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SALES REPRESENTATIVE, metropolitan New York. Experienced in Packaging. Established custom thermoformer of plastic packages and products seeks qualified representation—continuous forming capacity, coupled with extrusion facilities—primarily national accounts and volume applications. Replies held confidential. Box No. 1301, Modern Packaging.

GENERAL FOREMAN, OPERATORS For Extrusion Coating and Laminating Operation. Rare opportunity to handle rapidly growing new Processing Department. Must have extensive experience. Will be working with latest model equipment. Chase Bag Company, 5033 Southwest Avenue, St. Louis 10, Missouri.

PACKAGING PERSONNEL

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AVAILABLE—A challenge in the commercialization of new plastic films and related products. We require imaginative, aggressive sales-minded engineers able to deal effectively at all technical levels, both within and outside our company. We would welcome inquiries from competent Mechanical and Chemical Engineers with 1-3 years experience in the packaging, plastics or related fields, who have an interest in the economics as well as the technical aspects of New Product Development. Reply Box 1302, Modern Packaging.

PROCESS ENGINEER With experience in blown film extrusion, as well as Laminating and Coating Equipment. Unusual opportunity for talented individual in rapidly expanding plant. Variety of processes involved, including extensive new machinery installations. Excellent salary and other benefits. Chase Bag Company, 5033 Southwest Avenue, St. Louis 10, Missouri.

REPRESENTATIVES WANTED FOR EKCO-ALCOA Aluminum Foil Containers. Ekco-Alcoa, the world's largest manufacturer of rigid aluminum foil containers, now expanding its international sales organization and invites inquiries from manufacturer's representatives and distributors who are selling to the food processing and baking industries. Ekco-Alcoa, in addition to producing the most extensive stock selection of rigid aluminum foil containers, also manufactures a complete line of container feeding and closing machinery. Ekco-Alcoa has the engineering knowledge, the manufacturing skill and the service organization to meet specific requirements for aluminum foil containers of every type. Ekco-Alcoa Containers Inc., Export Department, 1949 North Cicero Ave., Chicago 39, Ill. U.S.A. Cable Address: EKCO-CHICAGO

FLEXIBLE PACKAGING SALESMAN—Expanding, dynamic converter has attractive position for qualified men in N.Y.C. and several other major eastern cities. Realistic pricing policy, high quality and compulsive customer service are geared to hold your customers. Reply in confidence to Vizofilm, 344 Coster St., N.Y. 59.

PLANT MANAGER—Large manufacturing firm in Midwest has opening for manager of subsidiary plant producing polyethylene film, employing up to 75 people. Requires background in polyethylene extruder, dies, casting and slitting machines. Some knowledge of work simplification, time study, job evaluation, production control, material handling techniques essential. Send resume of experience and salary requirements. Replies confidential. Reply Box 1306, Modern Packaging.

Situations Wanted

PLASTICS ENGINEER, M.S. degree. Ten years first-hand experience with thermo-plastics including extrusion of custom profiles and polyethylene film, compounding, and scrap recovery. Good knowledge die and machine design. Production, management, and sales background. Desires responsible position. State salary range offered. Will consider buying interest in successful operation. Reply Box 1303, Modern Packaging.

EXECUTIVE SALES-MANAGEMENT—Skilled, experienced manager of profitable, volume, industrial sales of packaging and plastics products and services. Fifteen years top level sales of plastics injection, compression, transfer, and blow molding services. Heavy experience in contract packaging of aerosol and liquid products. Extensive personal and industry contacts. Reply Box 1305, Modern Packaging.

CONSUMER PACKAGING PRODUCTION CO-ORDINATOR. Heavy production management experience at ass't level. Plans, surveys, inventory control, distribution, procurement, cost analysis, coordination. Line and staff. College: BS-MBA—Age 39. Reply Box 1307, Modern Packaging.

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SIXTY-YEAR-OLD, Midwestern, top rated, diversified manufacturer distributing consumer products through all national variety syndicates and many wholesalers wants additional consumer products. Maintains close contact with variety and wholesale buyers and has national sales force to merchandise products successfully. If you have a product that needs a market, write Director of Marketing Research, Box No. 1304. (All information held in strictest confidence.)

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MODERN PACKAGING



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with the Model 182

Combination SLITTER and DOCTOR MACHINE

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This versatile, low-cost Double-Arbor Doctor Machine will help you break costly slitting "bottlenecks". Precision-engineered and ruggedly built, it works two ways to speed production slitting!

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- up to 30" wide roll, 16" diameter
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- speeds up to 1000 f.p.m.

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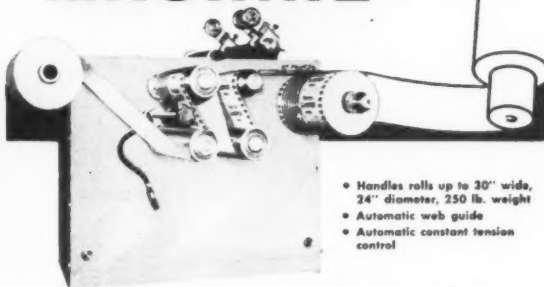
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- Handles rolls up to 30" wide, 24" diameter, 250 lb. weight
- Automatic web guide
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Quick, economical way to convert defective rolls into saleable stock! This compact Stanford Doctor Machine easily corrects soft, telescoped, uneven, or out-of-register rolls without tying up your production equipment. Saves many times its' own cost in material and labor.

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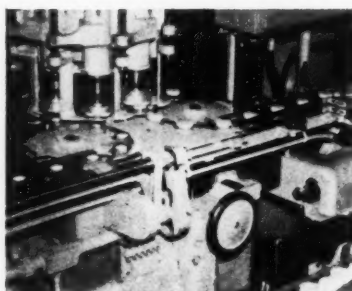
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NOXZEMA KEEPS PACE WITH MODERN METHODS

- Up-to-date merchandising and machinery feature success
- Pneumatic equipment plays important role

Born in a back room of a Baltimore pharmacy in 1914, Noxzema has grown in stature so that today, to millions of Americans it is a symbol of skin care and skin comfort. Highly competent, imaginative merchandising and the maintenance of maximum manufacturing efficiency through the use of up-to-date machinery have helped keep Noxzema a front runner in its field for over 35 years.

Noxzema's packaging facilities are a notable example of the company's progressive type of operation. In readying the Noxzema jar for market the knurled, turn-on closures are uniformly applied by Pneumatic Rotary Capping machines which keep the containers moving smoothly at speeds up to 120 units per minute. The capped jars then move into the intakes of Pneumatic Duplex Labelers which simultaneously apply front

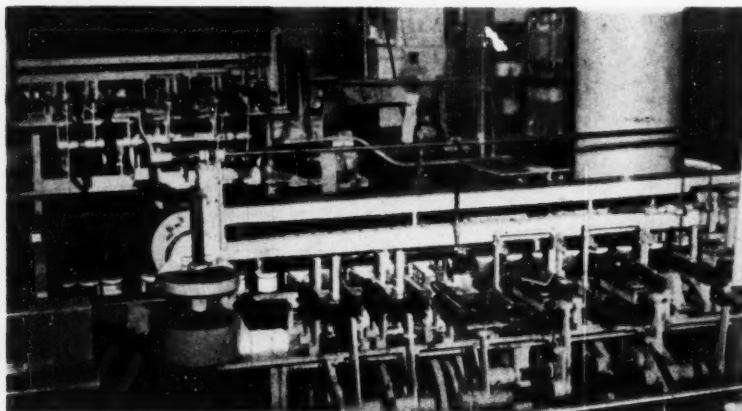


8-head Pneumacap machine in operation at plant of Bunting Chemical Company.

and back labels, accurately registered and put on to stay.

Noxzema's new High Noon sun tan lotion is packaged in attractive plastic tubes. The tubes are filled and sealed at high speeds on a machine built by Pneumatic's Carbert Manufacturing Company Division. Another example of Noxzema's policy of keeping pace with the last word in packaging.

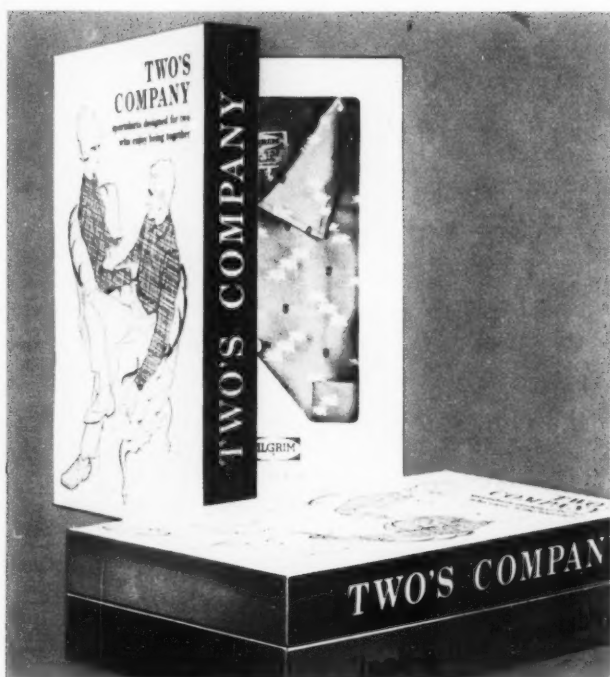
In its part of Noxzema's packaging processing, Pneumatic's modern equipment, built to fine precision standards with all the latest refinements in design, delivers the same "lower cost per container" operation which has attracted America's leading producers of bottled and packaged goods. Pneumatic could well help you to better, more economical bottling or packaging, too.



Front and back labels are applied simultaneously to Noxzema skin cream jars by duplex McDonald-type labeling units.

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TWO'S COMPANY—This carton, developed for Sears, Roebuck and Co., was designed to capitalize on the "togetherness" appeal in selling matched sport shirts to teenage and young married groups. The prerequisites established for this box were that it be a suitable gift item and a self-merchandise. "Two's Company" was offset printed in slate and peacock blue on white paperboard. A perforated hinge permits separation for size-matching or separate sale.



FEATURA—The Featura package was designed to induce purchase of expensive hosiery in a group of high fashion specialty shoe salons. The loose lid-wrap is lithographed in cerise, dark gray and gold bronze. It is embossed, and given a high gloss with acetate lamination. The package commands visual attention and conveys a quality appeal in keeping with the atmosphere of the salons.

These are the packages that won 2 important awards for Lassiter

LASSITER is proud to announce that two of its recently designed packages have won recognition by the American Institute of Graphic Arts. The two, shown here, are being displayed in the touring exhibition, "A I G A Packaging 1960." This award-winning group of packages is scheduled to appear in cities throughout the United States and abroad.

Entries were judged on their overall excellence as packages—including their effectiveness as merchandising tools.

These two examples of packaging artistry and technical skill typify Lassiter's creative approach to *every* challenge. Your problem may be a simple one, or one that calls for an entirely new packaging concept. Either way, depend on Lassiter to solve it efficiently—and economically.

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Mrs. Taylor never heard of Continental's Gair division

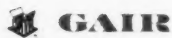
but the GAIR people
know her very well!

Continental always keeps its eye on the unsuspecting Mrs. Taylor. That's why Mrs. Taylor always keeps *her* eyes on products in Continental's Gair cartons.

Continental keeps up on the colors she likes, the shapes that stop her . . . what makes her *buy*.

The only evidence Mrs. Taylor sees of this endless intelligence, of the Continental fine facilities from coast to coast for lithography, gravure and letterpress printing, is the ever-improving cartons on the shelves. Cartons more colorful, more convenient to use, easier to read. Cartons that go with her to the checkout counter.

So remember, years of leadership in the printing, construction and manufacture of boards and folding cartons give Continental's Gair division the experience to turn your problem into profits. Call us today!



CONTINENTAL  CAN COMPANY

BOXBOARD AND FOLDING CARTON DIVISION
530 FIFTH AVENUE, NEW YORK 36, N. Y.

